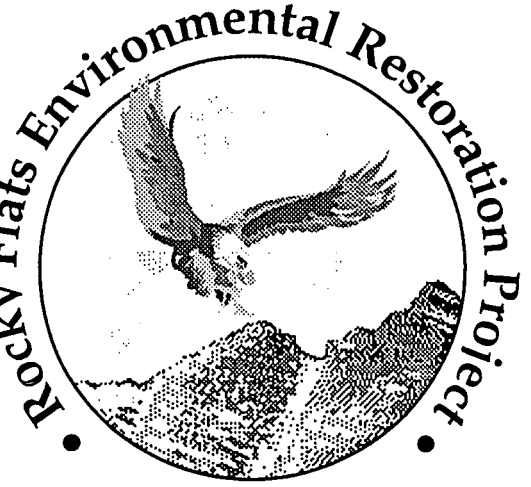
DOE, RFO
Quarterly Environmental Restoration Compliance Action Report



Second Quarter
January - March
FY1994

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EXECUTIVE SUMMARY

A meeting was held on March 3, 1994, among DOE and EG&G to discuss the results of the Gilbert Screen Contamination Methodology. Statistical tests show that the difference between background and Operable Unit (OU) 1 metals concentrations are, in some cases, "statistically significant." In these cases, the Gilbert Method involves professional judgement concerning spatial and temporal consistency, geochemistry, hydrology, and general science and engineering. EPA's toxicologist does not agree with this methodology.

EPA and CDH granted an extension to eight of the IAG Table 6 milestones for OU 1. The agencies found good cause for the extension based on the need of OU 1 to incorporate recent efforts to develop a consistent, programmatic approach for conducting Corrective Measures Studies/Feasibility Studies across all OUs at the Rocky Flats.

The modification to the OU 2 Field Treatment Unit (FTU), implemented in December 1993, continues to reduce the waste that is generated as sludge. While additional time and monitoring is required to accurately evaluate the amount of sludge reduction, preliminary estimates indicate that a reduction of approximately 50 percent is being achieved.

Sample aggregation for the OU 3 Wind Tunnel samples has been determined. Samples will be sent to an analytical laboratory for analyses. This data will then be used to calculate the amount of plutonium resuspended during the Wind Tunnel Study.

The eagles in OU 3 have not produced offspring and are expected to leave shortly. Installation of the air monitors south of the Standley Lake dam will begin as soon as the eagles are gone.

DOE has directed EG&G to include removal of Building 788 and closure of RCRA Units 21 and 48 in the Operable Unit 4 Interim Measure/Interim Remedial Action Environmental Assessment (IM/IRA EA) Decision Document (DD). In conjunction with this direction, DOE has also eliminated the special emphasis item, which called for removal of the facilities by September 30, 1994.

Sludge removal operations in OU 4 began on February 7, 1994, in Pond 207B South. Approximately 210,000 gallons of sludge have been removed and transported to storage at the 750 Storage Pad. Concurrently, the second vacuum loader truck arrived on plantsite and began the various acceptance tests required prior to beginning sludge removal operation.

DOE completed their National Environmental Policy Act (NEPA) determination for the OU 4 pond closure. An environmental assessment is required. This determination confirms the planning baseline. The NEPA process activities are on schedule.

DOE continues to work toward implementing a dispute strategy with the agencies regarding the Notice of Violation (NOV) that was issued by CDH on February 16, 1994. The NOV alleged that DOE violated the IAG by missing the milestone for delivery of the draft RFI/RI Report for OU 8, which was due February 14, 1994. The Ten-Day Notification Report for the IAG Extension Report Denial was delivered to DOE/HQ on March 1, 1994. The 2- week

informal dispute resolution process expired on March 15, 1994. DOE has requested a 3-week extension of the informal discussion process.

The Dispute Resolution Committee held its second meeting on March 3, 1994, regarding the Pond Water Interim Measure/Interim Remedial Action (IM/IRA). There was some agreement on technical issues and potential solutions; however, jurisdictional issues still remain in dispute resolution. If a unanimous resolution of the dispute is not reached within 21 days (April 1, 1994), EPA's Regional Administrator will issue a written position on this dispute.

On March 8, 1994, revised and rescoped project plans were submitted to EPA and CDH for OUs 7 and 11. Both proposals combine the Phase I and Phase II RFI/RI investigations, extend the Phase I milestones, but delete the Phase II milestones. Thereby streamlining the projects. DOE is waiting for approval of the proposals and schedules. A proposal to move Individual Hazardous Substance SIte (IHSSs) 166.1, 166.2, 166.3, and 167.1 from OU 6 to OU 7 was also included in the memorandum.

A meeting was held on March 3, 1994, with the EPA, CDH, DOE and EG&G to discuss the public comments on the OU 16 Proposed Plan and also the preliminary Responsiveness Summary to Public Comments. The objective is to obtain agreement as to what the public comments actually entail and to expedite the response process. The preparation of the No Further Action Justification (NFAJ) Record of Decision (ROD) has been completed in draft. This action will close OU 16 at Rocky Flats.

A Dispute Resolution Committee meeting was held on March 3, 1994, to discuss the issues of a compromise on data aggregation for exposure calculation that resulted in a stop work order for Baseline Risk Assessments in OUs 2, 3, 5, 6, and 7. A compromise between EPA and DOE still has not been reached.

NATIONAL ENVIRONMENTAL POLICY ACT (ACTIVITIES)

National Environmental Policy Act (NEPA) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) are fully integrated in all Environmental Restoration (ER) projects.

A draft OU 4 Interim Measure/Interim Remedial Action (IM/IRA)/Environmental Assessment (EA) is being prepared, and the following NEPA documents were prepared and submitted to DOE for approval or action:

- Well Abandonment and Replacement Program 1994 Categorical Exclusion (CX)
- Background Soils Characterization Project CX
- Site Characterization at OU 11 (West Spray Field) CX
- Drill Cuttings Storage Facility EA

The Installation of Trailers in Contractor Yard CX was approved by DOE, and DOE published a Finding of No Significant Impact (FONSI) for the New Sanitary Landfill EA.

A draft document, "Integration of NEPA, CERCLA, RCRA, Activities Under the Interagency Agreement (IAG) at Rocky Flats (RF)" is at DOE/HQ for review and approval.

The new Sitewide Environmental Impact Statement (EIS) is scheduled to be completed with a Record of Decision (ROD) in August 1996. The near-term activities could be handled as interim actions, if necessary, to avoid schedule impacts.

ECOLOGICAL ACTIVITIES

The primary focus this quarter has been on environmental evaluations (EEs) for the 16 OUs. Results are presented in the EE reports submitted as an appendix of the RFI/RI report for each OU. The Phase III RFI/RI report for OU 1 was submitted to the Natural Resource Trustees in December 1993 and their comments are being addressed. Preliminary field sampling has been completed for OU 11 and the EE is being written. A Statement of Work (SOW) has been drafted for the re-sampling of OU 6 ponds for polychlorinated biphenyls (PCBs) and for a risk assessment on PCBs in pond sediments.

Once again, a pair of bald eagles displayed courtship behavior and nest-building at OU 3 near Standley Lake. Presumably this is the same pair that built a nest in spring 1993. A second nest was built about 200 meters east of the first. The Colorado Bird Observatory is under contract to continue collecting behavior and habitat use data as long as the eagles are present.

The Resource Protection Program (RPP) involves biological surveys and assessments to ensure compliance with biological regulations (Endangered Species Act, Fish and Wildlife Coordination Act, Migratory Bird Treaty Act, Bald Eagle Protection Act, Colorado State Species of Concern) for OUs and sitewide projects. Sitewide ecological mitigation plans for wildlife habitat and wetlands damaged or destroyed as a result of remediation or other land disturbance projects at RF are being developed. As part of the mitigation strategy, the Army Corps of Engineers is working on a Sitewide Wetland Delineation Project, which will identify all wetlands at RF.

Mitigation efforts will continue to be developed in concert with the Natural Resource Damage Assessment (NRDA) process. The NRDA rule provides for the assessment of "residual" damages by the Natural Resource Trustees.

The first field season for the Ecological Monitoring Program (EcMP) was completed in September 1993. Field and laboratory information was obtained for water chemistry and biota, terrestrial vegetation, small mammal populations, soil invertebrates, and ecosystem functions. Aquatic information was collected from ponds, streams, and seeps onsite, while terrestrial measurements were collected from 12 permanent sites in four different vegetation communities. Ecological data from OU 11 are also being analyzed; the endpoints measured and the methodologies used will make these data comparable to other sites at Rocky Flats. Many of the sampling activities are collocated in space and time so that a comprehensive suite of ecological information can be obtained from a single site. These measurements will establish an ecological baseline for the Rocky Flats and will be useful in determining ecological effects of plant activities or remediation.

Many of the data sets from the above activities are not complete, but preliminary analyses indicate that many of the sites in the Buffer Zone support a rich and diverse flora and fauna. The areas with the lowest diversity were former dryland farming sites in the southeast corner of the plant that are now dominate by reclaimed grasses. Comparisons between Buffer Zone, OU, and offsite areas will further document exposure values and ecological effects to Rocky Flats ecological resources.

The success of the French drain re-seeding reclamation effort was monitored in late summer 1993. Seventy plant species were recorded in this area; and forb *Melitotus officinalis* was the most frequently found. However, basal cover averaged approximately 5 percent, so the area was hand seeded in March 1994 with western wheatgrass (*agropyron smithil*). Reclamation monitoring will continue at this site as appropriate Rocky Flats reclamation standards for cover, diversity, and biomass production are determined.

ENVIRONMENTAL RESTORATION SCHEDULE ACTIVITIES

OU 1 - 881 HILLSIDE ASSESSMENT/REMEDIATION

OU Description

The alluvial ground water at the 881 Hillside Area, located north of Woman Creek in the southeast section of Rocky Flats, was contaminated in the 1960s and 1970s with solvents and radionuclides. The area is approximately 2 miles from the eastern, outer edge of the plant's buffer zone at Indiana Street. The various Individual Hazardous Substance Sites (IHSS) that make up OU 1 were being investigated and treated as high-priority sites because of potentially elevated concentrations of organic compounds in the near-surface ground water and the proximity of the contamination to a drainage system leading to an offsite drinking water supply. The selected Interim Remedial Action (IRA) at OU 1 involved construction of an underground drainage system called a French drain that intercepts and contains near-surface ground water flowing from the OU 1 area. The near-surface water is treated at the 891 treatment facility, designed for this purpose, and released onsite into the South Interceptor Ditch (SID) along Woman Creek. Water collected from this ditch undergoes a secondary analysis prior to release. IRA construction was completed in April 1992. The Remedial Investigation and Feasibility Study (RI/FS) to determine the final remedial action are continuing in parallel with operation of the IRA.

Second Quarter FY94 Activity

The regulatory agencies completed their review of the Operable Unit (OU) 1 final Phase III RFI/RI Report and submitted their comments on January 20, 1994. On January 24, 1994, a meeting was held with the regulatory agencies to discuss their comments. EPA's comment on the use of a Monte Carlo Simulation in the Quantitative Uncertainty Analysis were elevated to EPA Headquarters. DOE is considering a request that the regulatory agencies approve all of the RI Report except the Human Health Risk Assessment (HHRA) portions of the uncertainty analysis. In addition, EPA requested that antimony and manganese be added to the Phase III RFI/RI Report as site contaminants. The concentrations of these elements were found at what is believed to be background levels. In a continued effort to resolve this issue, EPA and CDH asked if these chemicals would drop out of the Gilbert Screens for Contaminants of

Concern (COC), which have been developed for use in Operable Units 2 through 7. Calculations were performed to make this determination. A meeting was held on March 3, 1994, among DOE and EG&G to review the results of the Gilbert Screen Contaminant selection methodology. The statistical tests show that the difference between background and OU 1 metals concentrations are in some cases "statistically significant." In these cases, the Gilbert Method involves professional judgement concerning spatial and temporal consistency, geochemistry, hydrology, and general science and engineering. EPA's toxicologist does not agree with this methodology.

EPA and CDH granted an extension to the IAG Table 6 Milestones for OU 1. EPA and CDH found good cause for the extension based on the need of OU 1 to incorporate recent efforts to develop a consistent programmatic approach for conducting Corrective Measures Studies/Feasibility Studies (CMS/FS) across all OUs at Rocky Flats. The following extensions of the IAG have been granted on OU 1 Milestones.

Deliverable	Milestone Date
Draft CMS/FS	August 25, 1994
Final CMS/FS	November 22, 1994
Draft Proposal Plan	November 22, 1994
Final Proposal Plan	February 24, 1994
Responsiveness Summary	June 23, 1994
Final Responsiveness Summary	September 22, 1995
Draft CAD/ROD	September 22, 1995
Final CAD/ROD	December 22, 1995

A meeting was held on January 6, 1994, with EPA, CDH, and DOE to discuss the scope of activities in the CMS/FS and explore ways to accelerate the program. Many portions of the CMS/FS are contingent upon the final results of the Phase III RFI/RI Report, and were placed on hold. A strategy will be developed for completing Technical Memorandum (TM) #10, *Remedial Action Objectives*, as soon as it is determined whether manganese and antimony will be included as site contaminants. The first draft of TM #11, *Alternative Array*, is complete and the review was completed on March 1, 1994.

A meeting was held on January 19, 1994, with CDH to address the issue of excess chemicals on Plantsite and the method to be used in the treatment of these chemicals. It was agreed that the OU 1 IM/IRA System was not the best treatment system to process the chemicals.

DOE approved the discharge of effluent Tank T-206. Written approval was required because low-level xylene was detected in Tank T-206, and no treatment standard exists for xylene at the OU 1 Treatment Facility. On February 3, 1994, DOE received a warning letter from CDH concerning the release of untested effluent water from the 891 Water Treatment Building to the South Interceptor Ditch (SID). The letter requires DOE to submit documentation of compliance to CDH within 30 days. To comply with CDH's instructions, On March 1, 1994, the following documentation was submitted to CDH: (1) Procedure on Treating Effluent Discharge, OU 1 Building 891; (2) Sample Effluent Discharge Data Sheets.

Problems with the reproducibility in the gas chromatograph in the OU 1 891 Treatment Building required the vendor to install a component needed to complete the system. The instrument and the chassis of the in-line system were delivered on February 25, 1994. Installation, start-up, and testing continues. The back pressure valve on the ion exchange acid regeneration system failed and had to be replaced. Anchors have not yet been received for the stabilization of the footing drain flow meter. Higher volumes of water are beginning to flow into the French drain. Significant water treatment efforts will probably be needed from March 1994 through the end of May 1994.

Total approximate treated ground water to date for Operable Unit 1 IM/IRA is 1,914,040 gallons.

IAG MILESTONES THROUGH FY95 FOR OU 1	SCHEDULE	ACTUAL
Submit draft proposed IM/IRA Decision Document	18 Sep 89	18 Sep 8
Submit proposed IM/IRA Decision Document	06 Oct 89	06 Oct 89
Submit final IM/IRA Decision Document	05 Jan 90	05 Jan 90
Begin Phase I-A IM/IRA Construction	15 Jan 90	15 Jan 90
Begin Phase I B IM/IRA Construction	08 Oct 90	23 Sep 90
Submit final Phase III RFI/RI Work Plan	31 Oct 90	31 Oct 90
Restart Phase I-A IM/IRA Construction (after shutdown)	20 Jun 90	20 Jun 90

IAG MILESTONES THROUGH FY95 FOR OU 1	SCHEDULE	ACTUAL
Begin Phase I-B IM/IRA Construction (ahead of schedule)	28 Sep 90	28 Sep 90
Submit IM/IRA Implementation Document	22 Feb 91	22 Feb 91
Begin Phase II-A IM/IRA Construction	05 Aug 91	05 Aug 91
Begin Phase II-B IM/IRA Construction	02 Mar 92	02 Mar 92
Complete IM/IRA Construction (French drain)	13 Apr 92	13 Apr 92
Submit draft Phase III RFI/RI Report	28 Oct 92	28 Oct 92
Submit final Phase III RFI/RI Report	15 Nov 93	
Submit draft CMS/FS Report	25 Aug 94	
Submit final CMS/FS Report	22 Nov 94	
Submit draft PP	22 Nov 94	
Submit final PP	24 Feb 95	
Submit draft Responsiveness Summary	23 Jun 95	
Submit final Responsiveness Summary	22 Sep 95	
Submit draft CAD/ROD	22 Sep 95	

OU 2 - 093 PAD, MOUND, AND EAST TRENCHES ASSESSMENT/REMEDIATION

OU Description

The contamination at the 903 Pad and Mound areas is largely attributed to the storage in the 1950s and 1960s of waste drums that corroded over time, allowing hazardous and radioactive material to leak into the surrounding soil. Additional contamination may have resulted from wind dispersion during drum removal and soil movement activities. The East Trenches Area was used for disposal of plutonium- and uranium-contaminated waste and sanitary sewage sludge from 1954 to 1968. Two areas adjacent to the trenches were used for spray irrigation of sewage treatment plant effluent; some may have contaminants that were not removed by the treatment system.

An IM/IRA provides for surface water in source areas of contamination to be collected, treated, and discharged to the surface water drainage. Operation of the field-scale treatability unit for the South Walnut Creek drainage began in May 1991. The effectiveness of the treatment process was evaluated at three locations: the entrance to the treatment facility, several points within the facility, and the discharge point. The unit is anticipated to remain in service until the final remedial action is operational. The RI and FS are continuing in parallel with the IRA.

A second IM/IRA was established in late-1991. This Subsurface Investigation IM/Interim Remedial Action Plan (IRAP)/EA) is north of Woman Creek and encompasses the 903 Pad, the Mound Area, and the East Trenches Area of OU 2. This IM/IRAP/EA identifies and evaluates interim remedial actions for removal of residual free-phase VOC contamination from three distinct subsurface environments at OU 2. Each of the VOC-removal actions involve *in situ* vacuum-enhanced vapor extraction technology. The interim remedial actions for the collection of information will aid in the selection and design of final remedial actions that address subsurface, residual free-phase VOC contamination at OU 2.

Second Quarter FY94 Activity

A meeting was held on January 19 through 21, 1994, with DOE/HQ to discuss the preliminary draft Phase II RFI/RI Report. EPA and CDH comments were received for the report by the end of February 1994. CDH has not responded.

Comments on TM #9, *COC*, have been received. The comments are being addressed. A Statement of Work (SOW) is being prepared for the continuation of environmental evaluation (EE) report. All EE data have been collected for the preparation of the Report.

The draft final Soil Vapor Survey (SVS) Report was received by EPA and CDH on February 17, 1994. A modification to the draft final SVS Report is planned for April 1994 and will include comprehensive SVS work at five "High-level" contamination areas. The results of the Comprehensive Survey will be included in the OU 2 SVS Report as an amendment. The final SVS Report is scheduled for delivery to the EPA and CDH by June 7, 1994.

The final South Walnut Creek IM/IRA Treatability Study Report was submitted to EPA and CDH on January 16, 1994, meeting the IAG milestone.

DOE/HQ, DOE/RFO, and EG&G met to discuss the scope, budget, and schedule associated with Site 2 of the IM/IRA Soil Vapor Extraction (SVE) Pilot Program. The IM/IRA pilot testing to be conducted at Site 2, the East Trenches Area of OU 2, will incorporate six-phase soil heating as an enhancement to SVE in cooperation with EM-50. Pilot Test #1 began on February 17, 1994.

Installation of the permanent plant power continues to be an urgent item for the OU 2 Field Treatability Unit (FTU). Without permanent power, the FTU will continue to experience shutdowns caused by generator failure. The engineering package for construction is complete with construction scheduled to commence on or before April 4, 1994.

Total treated surface water to date for OU 2 FTU is 22,486,400 gallons.

IAG MILESTONES THROUGH FY95 FOR OU 2	SCHEDULE	ACTUAL
Submit draft Phase II RFI/RI Work Plan (Alluvial)	21 Dec 89	21 Dec 89
Submit final Phase II RFI/RI Work Plan (Alluvial)	12 Apr 90	12 Apr 90
Submit draft proposed IM/IRA Decision Document	19 Jun 90	19 Jun 90
Submit proposed Plan IM/IRA Decision Document	18 Sep 90	18 Sep 90
Submit draft Responsiveness Summary	13 Dec 90	13 Dec 90

IAG MILESTONES THROUGH FY95 FOR OU 2	SCHEDULE	ACTUAL
Submit final Responsiveness Summary and final IM/IRA Decision Document	13 Dec 90	13 Dec 90
Submit draft Phase II RFI/RI Work Plan (Bedrock)	13 Dec 90	13 Dec 90
Field Treatability Test System Installation Complete	10 May 91	10 May 91
Begin Field Treatability Testing (Carbon System)	13 May 91	13 May 91
Submit final Phase II RFI/RI Work Plan (Bedrock)	02 Jul 91	02 Jul 91
Submit draft Treatability Test Report (Phase I GAC)	01 Apr 92	01 Apr 92
Complete IM/IRA Construction (radionuclides removal system)	24 Apr 92	24 Apr 92
Begin Field Treatability Testing (radionuclides removal system)	27 Apr 92	27 Apr 92
Submit final Treatability Test Report (Phase I GAC)	02 Jun 92	02 Jun 92
Submit Subsurface Site I draft Test Plan	29 Oct 92	29 Oct 92
Submit draft Phase II RFI/RI Report	12 Mar 93*	
Submit final Phase II RFI/RI Report	09 Aug 93*	
Submit draft CMS/FS Report	04 Nov 93*	
Submit final So. Walnut Creek IM/IRA Treatability Study Report	26 Jan 94	
Submit final CMS/FS Report	10 May 94*	
Submit draft PP	10 May 94*	
Submit final PP	09 Aug 94*	
Submit Soil Vapor Extraction Test Pilot #1	17 Feb 94	
Submit Responsiveness Summary	13 Dec 94*	
Submit draft CAD/ROD	16 Mar 95*	
Submit final Responsiveness Summary	16 Mar 95*	
Submit CAD/ROD Work Plan	15 Jun 95*	
Submit final CAD/ROD	15 Jun 95*	

* Because of Human Health Risk Assessment (HHRA) issues, work was stopped on the RI Reports in August 1993. In October 1993, the stop work order was partially lifted on OU 2. All subsequent milestones will require extensions except for IM/IRAs; the regulatory agencies approved extensions.

OU 3 - OFFSITE AREAS

OU Description

OU 3 can be divided into two categories based on two main activities. The IAG directs activities according to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This involves assessment of contamination in offsite areas also referred to as Contamination of the Land Surface (IHSS 199), Great Western Reservoir (IHSS 200), Standley Lake (IHSS 201), and Mower Reservoir (IHSS 202). The second category responds to a 1985 out-of-court lawsuit settlement, McKay vs. U.S., which directed that the surface soil contamination be remediated. Remedial activities in compliance with the Settlement Agreement (deep disc plowing) began in 1985. The disturbance resulting from remediation is being revegetated with mediocre success. The overall schedule for this activity is determined by the year-to-year success of the revegetation effort and requirements of the landowners.

Second Quarter FY94 Activity

The eagles have not produced offspring in OU 3 and are expected to leave shortly. Installation of the air monitors south of the Standley Lake dam will begin as soon as the eagles are gone.

Agreement with the regulators was reached on a method for determining COCs for the sediments in the offsite reservoirs. No comparable background data set for reservoir sediments currently exists. The comparison to background to identify COCs will be replaced by a weight of evidence approach. EPA approved this method in a letter dated March 24, 1994.

The data protocol issues will be evaluated to determine if there can be a programmatic approach to how data is handled. This information will then be used to update the OU 3 database.

Sample aggregation for the wind tunnel samples has been determined. Samples will be analyzed to calculate the amount of plutonium resuspended during the Wind Tunnel Study. The first step will be to send soil samples collected in the wind tunnel cyclone to an analytical laboratory for analysis. This process will assist in determining the methodology for aggregating the other samples.

IAG MILESTONES THROUGH FY95 FOR OU 3	SCHEDULE	ACTUAL
Submit draft Past Remedy Report	26 Oct 90	26 Oct 90
Submit draft Historical Information/preliminary Health Risk Assessment Report	09 Nov 90	09 Nov 90
Submit final Past Remedy Report	02 Apr 91	02 Apr 91
Submit final Historical Information/preliminary Health Risk Assessment Report	16 Apr 91	16 Apr 91
Submit draft Phase I RFI/RI Work Plan	10 Jul 91	10 Jul 91
Submit final Phase I RFI/RI Work Plan	06 Dec 91	06 Dec 91
Submit draft Phase I RFI/RI Report	14 Feb 94*	
Submit final Phase I RFI/RI Report	21 Oct 94*	

* Extension date approved by the regulatory agencies. Because of HHRA issues, work has stopped on the RI Reports. Extensions will be required on all subsequent milestones.

OU 4 - SOLAR EVAPORATION PONDS

OU Description

OU 4 is comprised of five solar evaporation ponds: 207A, 207B series (north, center, south), and 207C, which were constructed for treatment and storage of process water from industrial operations. The process water contained treated acidic wastes, industrial liquid wastes (e.g., metal plating solutions), and low-level radioactive wastes.

As technology improved through the early 1960s and 1970s, the ponds were relined with various upgraded materials. However, leakage from the ponds into the soil and ground water was detected. Interceptor trenches were installed in 1971 to collect and recycle contaminated ground water to the ponds and to minimize natural seepage and pond leakage from entering North Walnut Creek. In 1981, these trenches were replaced by the current, larger interceptor trench system (ITS), which returned approximately 4 million gallons of ground water back into the solar evaporation ponds each year.

No additional process water has been pumped into the ponds since 1986. However, the ITS collected and returned ground water into the solar evaporation ponds until new storage tanks were completed and placed in operation in April 1993. The tanks allowed the RFP to stop placement of contaminated ground water into the ponds. This placement of water into the ponds had been occurring without meeting Land Disposal Restrictions and Minimum Technology Requirements of Resource Conservation and Recovery Act (RCRA). A new, dedicated Building 910 evaporation-treatment facility became operational in July 1993. This building supplements the plant's waste treatment facility in Building 374 to process the water stored in the modular tanks.

The Solar Evaporation Ponds Subproject has been comprised of four technical areas: (1) pond sludge processing by means of the Agreement in Principle between DOE and CDH; (2) a water management/treatment by means of the IM/IRA DD signed by EPA, CDH and DOE; (3) the OU 4 assessment and remedial action, per the IAG which identified the ponds as one of the sixteen OUs to be remediated at the RFP and superseded the 1988 Ponds-Closure Plan submitted by DOE to the regulators; and (4) pad operations and storage activities that are necessary to meet the plant's RCRA interim status and permit requirements with regards to storage of pond wastes.

The water management and pond sludge clean-out are necessary precursors to OU 4 assessment and remediation, and pad operations are necessary support activities at least until the pond sludge waste is disposed. Revisions to these areas are being prepared in accordance with the recent dispute resolution for OU 4.

Work in these four areas was planned to close the ponds and remediate OU 4. The work was scoped to (1) remove water from the ponds, (2) provide a treatment facility to replace the ponds as evaporation-treatment and storage units for pond-related contaminated ground water, (3) remove and dispose of pond sludge in compliance with all regulations such as the Land Disposal Restrictions of RCRA, (4) assess the nature and extent of contamination at the ponds; (5) complete a RCRA closure of the impoundments; and (6) remediate the ponds as needed.

The April 1992 IM/IRA DD was developed as a regulatory agency requirement not included in the scope outlined in the IAG. DOE attempted to modify an existing permit for water removal and treatment for liquids in the solar ponds and ground water collected by the ITS, but the regulatory agencies rejected permit modification and required development of an IM/IRA to document operation and use of the proposed water treatment system and provide the permitting mechanism for the system. The development and implementation of this IM/IRA preceded and overlapped the IAG scheduled Phase I RFI/RI field work. All construction has been completed, and the IM/IRA treatment facility is now in operation.

Second Quarter FY94 Activity

Concerns were raised over potential excursion of ground water up to or above the current level of the liners of Pond 207B-South and the resulting impact on the ability of the site to protect human health and the environment for 1,000 years, as required by the hazardous waste landfill siting criteria. To address this issue, a solution was proposed to have the liners from Pond 207B South excavated, along with the liners from the other B-series ponds and Pond 207C, and consolidated in the southern portion of Pond 207A. This part of Pond 207A would then be capped with an engineered barrier designed for a 1,000-year performance. This action would result in a situation where no portion of the liners will be within 4 feet of the highest recorded elevation of the alluvial ground water, and all liner material would be under the

1,000-year barrier. Further, a subsurface lateral drainage system within the 1,000-year Area of Concern (AOC) will be incorporated as a mechanism for ensuring ground water does not migrate "upwards" into the waste zone in the event that climactic changes over the next millennium should raise the water table.

Current planning calls for clean-closing as much of the Solar Ponds site as possible; however, clean-closure of Pond 207C may not be economically feasible. An assessment of this feasibility cannot be made until the pond is empty and sampled, but waiting for that event will result in unacceptable delays in the conceptual and Title II designs. Therefore, the design subcontractor has been directed to design an area of 1,000-year protection to cover the consolidated liners and an area of RCRA-compliant protection for Pond 207C. This approach will allow the final design to be changed without significant schedule impact as information concerning subsurface contamination is developed.

The size of the proposed 1,000-year protected area was increased to approximately eight acres to accommodate soil material from the buffer zone, the north hillside, and the other areas slated for clean closure. A decision was made that even the liner material in the area of Pond 207A, slated for 1,000-year protection, must be excavated, size reduced, and placed under the 1,000-year barrier to provide acceptable structural stability for the cap.

The OU 4 Phase I remedy is being planned assuming a Corrective Action Management Unit (CAMU) permit will be obtained for the project. At the Joint Working Session on February 1, 1994, the CDH specified several issues associated with the establishment of a CAMU that needed to be addressed prior to issuing the IM/IRA DD.

A) The establishment of a CAMU could require treatment of the contaminated waste (i.e. liners) prior to consolidation beneath the engineered barrier.

   The IM/IRA will contain sufficient justification as to why the current stabilization technology (a 1,000-year protective barrier) is an adequate and acceptable form of treatment.

B) The placement of soils contaminated above the preliminary remediation goals (PRGs) beneath the subsurface drainage layer will be contingent upon a

demonstration that the closure will not adversely affect ground water quality. Modeling data and analysis will be shown to the regulators to demonstrate that current design does not impact the ground water. Therefore, it is expected that soils contaminated above the PRGs will be placed below the subsurface drainage layer.

A meeting of the Colorado Hazardous Waste Commission was held on February 15, 1994. A portion of the meeting was devoted to public comment concerning proposed promulgation of the Colorado version of the CAMU rule. Adoption of the rule is a key element in the successful implementation of the OU 4 remediation plans. Discussions of this subject will continue at the next monthly meeting. DOE is developing specific and hypothetical examples of the impact of CAMU at RF and in establishing communication with local industry groups also affected by this regulation. Since this will likely be the first application of the state's yet-to-be-enacted version of the CAMU regulation, close cooperation between all parties is essential to gain confidence in this new law and to its successful application to OU 4.

Significant time was spent at the Joint Working Session on February 15, 1994, to capture and discuss the regulatory agencies' position on contaminated soils in the vadose zone hypothetically subject to influence by rise of ground water elevations over geologic time. A presentation was made concerning methods available to demonstrate that leachability of these soils is not of concern. A portion of the presentation discussed the difficulties associated with application of the methods and the likelihood that unassailable conclusions cannot be drawn from them. On February 16, 1994, the CDH communicated relaxed standards that must be met to resolve this issue. In view of the new standards, demonstration that the soils are not of concern is now possible with the simple, but conclusive, models applied unsuccessfully during our earlier efforts to quantify this problem. New results from these models and a worst-case cost estimate for removal of all suspect soils was available on February 24, 1994.

Preparation of the Post Closure Monitoring and Maintenance Plan continues and is on schedule. An annotated outline was developed for the Post Closure Monitoring and Maintenance Plan and various criteria for

monitoring the engineering barrier, vadose zone, and ground water.

The regulatory agencies informed DOE that its application to separate removal of Building 788 from the IM/IRA AE DD was denied. A strategy to incorporate the Building 788 scope into the DD without impacting IAG milestone commitments was developed. DOE has directed EG&G to include removal of Building 788 and closure of RCRA Units 21 and 48 in the OU 4 IM/IRA EA DD. In conjunction with this direction, DOE has also eliminated the special emphasis item, which called for removal of the facilities by September 30, 1994. A schedule for accomplishing the inclusion in accordance with the timeline mandated by the IAG was developed. A walkdown of the facilities occurred the week of March 7, 1994.

IAG MILESTONES THROUGH FY95 FOR OU 4	SCHEDULED	ACTUAL
Submit draft Phase I RFI/RI Work Plan	08 Jun 90	08 Jun 90
Submit final Phase I RFI/RI Work Plan	26 Nov 91	26 Nov 91
Submit draft Phase I RFI/RI Report	Deleted	
Submit final Phase I RFI/RI Report	Deleted	
Submit draft Phase I IM/IRA Decision Document (DD)	14 Apr 94	
Submit draft Phase II RFI/RI Work Plan	22 Apr 94	
Submit final Phase II RFI/RI Work Plan	09 Sep 94	
Submit IM/IRA Responsiveness Summary	01 Nov 94[b]	
Submit Phase I final IM/IRA DD and final Responsiveness Summary	13 Jan 95[b]	
All Solar Ponds Emptied of Water and Sludge	20 Jan 95[a]	
Submit IM Design Work Plan (replaced with in-process design review)	Deleted	

• Deleted as part of the IAG dispute resolution decision.

[a] New milestone added to IAG Table Six as part of the IAG dispute resolution decision.

[b] Accelerated schedule as part of the IAG dispute resolution decision.

OU 5 - WOMAN CREEK ASSESSMENT

OU Description

This activity encompasses assessment and remediation of 11 IHSSs in the Woman Creek drainage: Original Landfill (IHSS 115); Ash Pits (IHSS 133.1 - 133.4); Incinerator (IHSS 133.5); Concrete Wash Pad (IHSS 133.6); Detention Ponds C-1 and C-2 (IHSS 142.10 and 142.11); Surface Disturbance (IHSS 209), southeast of Building 881; and Water Treatment Plant Backwash Pond (IHSS 196). Two additional surface disturbances have been identified and are located, one south of the Ash Pits and a second west of IHSS 209. These last two sites have been included in the OU 5 Work Plan. Possible contamination in this OU was caused by landfill operations, storm-water runoff into holding ponds, and ash-pit operations. Constituents in OU 5 are believed to include nitrates, plutonium, uranium, metals, beryllium, solvents, pesticides, oils, paints, and cleaners. Media affected include soils, sediments, surface water, ground water, and air resuspension.

Second Quarter FY94 Activity

Work on the HHRA has not yet resumed because the issue with data aggregation has not been resolved. However, background comparison activities began the week of February 3, 1994. The comment/response sheets responding to the EPA and CDH comments on draft TM # 12, *Exposure Scenarios*, are in review and will be held until the stop work order has been rescinded. The draft Modeling TM #13 was received by DOE on December 1, 1993. Comments from EPA and CDH were received. Comment/Response forms were prepared and received by DOE on March 11, 1994.

The EM 61 Time Domain Electromagnetic survey began on January 10, 1994, and re-established the grid used in prior surveys. Work on the survey continued throughout January 1994.

The map of the EM 61 geophysical survey was reviewed by EG&G on March 2, 1994, and the draft report was available by March 11, 1994. The preliminary map has excellent resolution of the previously known ash pits as well as indicating the location of a heretofore unknown anomaly that has similar characteristics of the known ash pits. The location of this new anomaly is directly under the high voltage power lines. The results of this survey will lead to the downscoping of the additional amount of

field work necessary to define the extent of the ash pits in this Individual Hazardous Substance Site (IHSS) 133 that is being addressed in TM #15.

The OU 5 database is 94 percent complete; the validated database is 90 percent complete. Missing radiochemistry data that was tracked, and the majority of the missing data were located at one laboratory. This data was in the Rocky Flats Environmental Database System (RFEDS) by March 11, 1994.

IAG MILESTONES THROUGH FY95 FOR OU 5	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work Plan	05 Apr 91	05 Apr 91
Submit final Phase I RFI/RI Work Plan	30 Aug 91	30 Aug 91
Submit draft Phase I RFI/RI Report	30 Nov 93*	
Submit final Phase I RFI/RI Report	03 May 94*	

* Extension date approved by the regulatory agencies. Because of HHRA issues, work has stopped on the RI Reports. Extensions will be required on all subsequent milestones.

OU 6 - WALNUT CREEK

OU Description

This activity encompasses assessment and remediation in the Walnut Creek Drainage of 19 IHSSs: A-series Detention Ponds, Ponds A-1 through A-4 (IHSS 142.1 through 142.4 and 142.12); the B-series Detention Ponds, Ponds B-1 through B-5 (IHSS 142.5 through 142.9); the North, Pond, and South Area Spray Fields (IHSS 167.1, 167.2 and 167.3); the East Area Spray Field (IHSS 216.1), the Trenches A, B and C (IHSS 166.1, 166.2 and 166.3); the Sludge Dispersal Area (IHSS 141); the Triangle Area (IHSS 165); the Old Outfall Area (IHSS 143); and the Soil Dump Area (IHSS 156.2).

Completion of field operations resulted in obtaining the following samples from the IHSSs in OU 6: stream sediment, pond sediment, surface soil, subsurface soil, surface and ground water.

Eleven new ground water monitoring wells, installed in OU 6 to supplement five existing wells, are being sampled each quarter for a minimum of 1 year. Geophysical surveys and radiation surveys were performed in selected areas to supplement the sampling activities.

The regulatory agencies have proposed a new IM/IRA on the operation of the Rocky Flats Ponds. If approved, this IM/IRA would affect the Rocky Flats pond water management, including OU 6, placing the water under CERCLA rather than the National Pollution Discharge Elimination System (NPDES).

Second Quarter FY94 Activity

DOE was informed by EPA of their decision to specify new milestones for the Pond Water Management IM/IRA on January 10, 1994. A meeting was held on January 13, 1994, among the regulatory agencies and DOE to begin a question resolution process for nonlegal and nonpolicy issues of the Pond Water Management IM/IRA. On January 20, 1994, DOE directed EG&G to prepare new scope and schedule assumptions, as well as a new schedule for the completion of the Pond Water Management IM/IRA DD. This task was completed. On January 24, 1994, DOE requested a 60-day extension to invoke the dispute resolution process to work in good faith to respond to the Pond Water Management IM/IRA issue and consider the policy implications of the IM/IRA. DOE believes the IM/IRA is not the proper vehicle to accommodate competing demands among various water

programs under the Clean Water Act, CERCLA, and RCRA. Pond water discharges are currently controlled under an extended NPDES discharge permit, and discharges from the terminal ponds are tested before release. These waters do not pose a risk to human health or the environment, although the unlined ponds have contaminated sediments that must be cleaned up. EPA and CDH consider the water in the ponds on the Rocky Flats site to be "waters of the U.S.," which has not been agreed to by DOE.

Subsequently, an EG&G subcontractor was given a stop work order on the Pond Water Management IM/IRA until further notice. In order to resolve this issue, DOE is conducting research and collecting information on various issues related to the Pond Water Management IM/IRA. The subcontractor stop work order will remain in effect until the conclusion of the dispute resolution process.

On February 25, 1994, EPA issued a Notice of Violation (NOV) to the DOE for failure to meet the non-IAG milestone attached to the DD for the Pond Water Management IM/IRA that is currently in dispute resolution.

Work continues on the scoping and drafting of specifications for a mobile water treatment unit with the capability to respond and treat credible spills and water contamination problems resulting from off normal occurrences. The Radionuclide Removal System specification of OU 2 was used as a technical reference for developing and improving the specification.

Work continues on the background comparison; other parts of the HHRA are still being delayed by the stop work order. A meeting was held among the regulatory agencies, DOE, and EG&G on February 10, 1994, to discuss progress-to-date and to review the databases that will be used for background comparisons.

A TM to support additional biota (and potentially pond sediment) sampling requirement for polychlorinated biphenyls (PCBs) in the A and B series of ponds is currently being reviewed. A meeting was held on February 28, 1994, with the regulatory agencies to review the plans for additional sampling of polychlorinated biethylene at the A and B series of ponds.

IAG MILESTONES THROUGH FY95 FOR OU 6	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work Plan	19 Apr 91	19 Apr 91
Submit final Phase I RFI/RI Work Plan	16 Sep 91	16 Sep 91
Resubmit final Phase I RFI/RI Work Plan	16 Dec 91	16 Dec 91
Submit draft Phase I RFI/RI Report	10 June 94*	
Submit final Phase I RFI/RI Report	18 Nov 94*	

*Extension date approved by the regulatory agencies. Because of HHRA issues, work has stopped on the RI Reports. Extensions will be required on all subsequent milestones.

OU 7 - PRESENT LANDFILL

OU Description

The OU 7 Present Landfill is located north of the plant complex on the western edge of an unnamed tributary of North Walnut Creek and is comprised of two IHSSs. IHSS 114 includes landfill waste and leachate at the Present Landfill, soils beneath the landfill potentially contaminated with leachate, and sediments and water in the East Landfill Pond. IHSS 203 contains potentially contaminated soils at the Inactive Hazardous Waste Storage Area. A section of the Present Landfill located in the southwest corner was used between 1986 and 1987 as a temporary storage area for hazardous waste. The Present Landfill began operation in August of 1968 and was originally constructed to provide for disposal of Rocky Flats' nonradioactive and nonhazardous wastes. In September 1973, tritium was detected in leachate from the landfill. During the mid-1980s, extensive investigations were conducted on the waste streams (types) placed into the landfill; consequently, hazardous wastes/hazardous constituents were identified. Although currently operating as a nonhazardous sanitary landfill, the facility is considered an inactive hazardous waste disposal unit undergoing RCRA closure.

Second Quarter FY94 Activity

A draft Data Quality Objectives (DQO) document was developed incorporating the new EPA guidance on DQOs through Step Five. Steps One through Five were completed and are ready for transmittal to the regulatory agencies. Steps Six and Seven will not be completed until the Phase I data evaluation section of the TM has been completed. Upon concurrence with Steps One through Five and after the process is defined for Steps Six and Seven, a Baseline Change Proposal (BCP) for the OU 7 will be initiated. CDH agreed that submittal of the TM revising the Phase I Field Sampling Plan (FSP) would include a data evaluation section for Phase I data that would satisfy the Phase I RFI/RI Report and Phase II RFI/RI Work Plan milestones. The design team is currently providing input into the DQOs process in order to ensure the objectives of this project are clearly defined.

All investigative derived materials (IDM) drums for OU 7 were correlated with a sample number or identified as not needing sampling per FO.23. Significant effort was made supporting the overall drum/sample correlation effort. This included coordinating the entire Rocky Flats RCRA/non-RCRA disposition of all drums per FO.23.

Many issues surfaced regarding the appropriateness of some of the guidance in FO.23 with respect to CDH guidelines for IDM.

A meeting was held on March 2, 1994, to discuss the East Landfill Pond. The current planning assumptions for OU 7 include addressing the pond in the OU 7 IM/IRA decision process. This is consistent with direction DOE wishes to take regarding the Pond Water IM/IRA.

On March 8, 1994, revised and rescoped project plans were submitted to EPA and CDH for OUs 7 and 11. Both proposals combine the Phase I and Phase II RFI/RI investigations, extend the Phase I milestones, but delete the Phase II milestones. Thereby streamlining the projects. DOE is waiting for approval of the proposals and schedules. A proposal to move IHSSs 166.1, 166.2,166.3, and 167.1 from OU 6 to OU 7 was also included in the memorandum.

EG&G provided an accelerated schedule and cost analysis to DOE to address an IM/IRA for leachate collection and treatment. This action was in response to the Pond Water IM/IRA NOV.

IAG MILESTONES THROUGH FY95 FOR OU 7	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work Plan	08 Jun 90	08 Jun 90
Submit final Phase I RFI/RI Work Plan	28 Aug 91	28 Aug 91
Submit draft Phase I RFI/RI Report	12 Oct 93*	
Submit final Phase I RFI/RI Report	16 Mar 94*	
Submit draft Phase II RFI/RI Work Plan	13 Sep 94*	
Submit draft Phase I proposed IM/IRA Decision Document (DD)	01 Nov 94	
Submit final Phase II RFI/RI Work Plan	15 Feb 95*	
Submit final Phase I proposed IM/IRA Decision Document (DD)	06 Apr 95*	
Submit IM/IRA Responsiveness Summary	14 Aug 95*	
Submit Phase I final IM/IRA DD and final Responsiveness Summary	09 Nov 95*	
Submit IM Design Work Plan	13 Dec 95*	

* Extension date approved by the regulatory agencies. Because of HHRA issues, work has stopped on the RI Reports. Extensions will be required on all subsequent milestones.

OU 8 - 700 AREA ASSESSMENT

OU Description

The 24 IHSSs that constitute OU 8 encompass separate sites inside and around the production area of the Rocky Flats Site. Contamination sources within the various IHSSs include above ground and underground tanks, equipment washing areas, and releases inside buildings which potentially affected areas outside the buildings. Contaminants from these sources may have been introduced into the environment through spills on the ground surface, underground leakage and infiltration, and in some cases through precipitation runoff. The chemical composition of the contaminants also varies widely between the IHSSs, ranging from low-level radioactive mixed wastes to nonradioactive organic and inorganic compounds.

Second Quarter FY94 Activity

DOE sent an extension request to the agencies on January 31, 1994, for the OU 8 draft Phase I RFI/RI Report due on February 14, 1994, and the final Phase I RFI/RI Report due on July 12, 1994. The CDH and EPA submitted a joint denial of the request on February 15, 1994, and have placed DOE in violation of the IAG. Under the IAG, stipulated penalties began accruing on February 15, 1994, of up to $5,000 for the first week and $10,000 for each week thereafter, until the RFI/RI Report is submitted. Technical issues and reprioritization of DOE projects in prior fiscal years were the basis for the extension request. DOE is working to implement a dispute strategy with the agencies regarding the IAG violation. Specific issues that affect the dispute are as follows: (1) the RFI/RI Work Plan remains unapproved by both EPA and CDH; (2) an initial OU 8 NOV was issued for the draft Phase I RFI/RI Work Plan in May 1992 and is still unresolved, although it has gone to dispute resolution; and, (3) the outstanding issue between DOE and the regulatory agencies on whether to use the residential use scenario for the OU 8 baseline risk assessment. The outcome of the dispute with the agencies will have an affect on all of the Industrial Area (IA) OUs (8, 9, 10, 12, 13, and 14) that will also miss IAG milestones during FY94. The Ten-Day Notification Report for the IAG Extension Report Denial was delivered to DOE/HQ on March 1, 1994.

The narrative of preliminary draft TM #1, *Footing/Under Drains Data Compilation*, was completed for review. Field

confirmation tasks began on January 31, 1994, and included site walks and interviews with building personnel to confirm specific locations of building drain outfalls and manhole connections. These field activities were used to confirm the data compilation and collection tasks completed to date in support of the draft TM #1. The areas visited during the site walks were Buildings 111, 124, 371, 440, 444, 460, 707, 771, 774, 779, 881, 865, and 991. Additionally, the final data compilation task that also supports the development of TM #1 will include chemical data summaries from the 1993 sampling events. These data summaries are being compiled and incorporated into TM #1.

However, review of twenty-four hours of video tape of the storm sewer system at RFP to confirm piping connections with engineering drawings has not been completed nor incorporated into TM #1. A request to obtain the video tapes for review was submitted on March 2, 1994. The final data compilations are being developed to the major compounds for the inclusion of chemical data summaries from the 1993 sampling events was transferred to maps and histograms. These data summaries were compiled and incorporated into TM #1.

High purity germanium (HPGe) radiation surveys on OU 8 IHSSs inside the Protected Area (PA) began on March 3, 1993. The expected completion date for the HPGe radiation surveys for OU 8 is April 5, 1994.

IAG MILESTONES THROUGH FY95 FOR OU 8	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work Plan	01 May 92	01 May 92
Submit final Phase I RFI/RI Work Plan	01 Dec 92	01 Dec 92
Submit draft Phase I RFI/RI Report	14 Feb 94*	
Submit final Phase I RFI/RI Report	12 Jul 94*	

* Extension required.

OU 9 - ORIGINAL PROCESS WASTE LINES

OU Description

This activity involves characterizing a series of tanks and associated process waste lines. The original Process Waste Lines (OPWL) consisted of 35,000 feet of buried pipeline that transferred process wastes from production buildings to onsite treatment plants. A system of 60 designated pipe section, 46 storage tank sites, and 3 other areas of suspected press waste leakage are included in OU 9. The system was placed into operation in 1952, and additions were made to the system through 1975. The original system was replaced over the 1975-1983 period by the new process waste system. Some tanks and lines from the original system were incorporated into either the new process waste system or the fire water deluge collection system.

The original system is known to have transported or stored various aqueous process wastes containing low-level radioactive materials, nitrates, caustics, and acids. Small quantities of other liquids were also introduced in the system, including medical decontamination fluids, miscellaneous laboratory liquids, and laundry effluent. The RFI/RI plan includes inspection and sampling of the OPWL tanks and pipelines that are accessible and soil sampling to determine the extent of contamination in the vadose zone. The soil sampling will be performed by installing test pits and boring where known or suspected releases occurred, near pipe joints and valves, at approximately 200-foot intervals along the pipelines, and by installing borings around the outdoor tanks. Soil characterization studies will determine the need for soil removal and/or treatment. The results of the RFI/RI will determine the need for interim and/or final remediation action.

Second Quarter FY94 Activity

The preliminary draft final OU 9 TM #1, *Field Sampling Plan - OPWL - Volume 1 - Tanks*, was received by DOE on December 14, 1993. The issue of how to handle active tanks was resolved. It is DOE's position that active tanks outside buildings should not be included in this field sampling TM. The current TM recognizes that the active tanks are under consideration but defers sampling activity until after the tank is taken out of use. DOE and EG&G comments were addressed on the TM #1, *Volume I - A, Outside Tanks*. After this task is completed, the draft final will be submitted for EPA and CDH review. Upon EPA and CDH approval, the field work will be initiated on OU 9 outside tanks that are inactive.

Additional data compilation site walks began on January 14, 1994, and the 500 Area Sites were included on January 25, 1994. The information gathered will be presented as part of TM #2, *Field Sampling Plan, Part II, Outside Pipelines.* A decision tree for conducting outside pipeline investigations was prepared and is currently being reviewed by DOE for incorporation into the TM. This work is part of the first stage of the RFI/RI for OU 9. Once field activities are completed, then the data collected will be used for the second stage of the RFI/RI and to identify areas for potential early action or no further action. Discrepancies in engineering drawings for the 700 Buildings have hampered data compilation activities. Because of the age of old process waste lines, reliable as-built drawings have not been located. The use of pipeline tracing equipment will need to be addressed in the draft TM #1, *Volume II - A, Field Sampling Plan for Outside Pipelines.* This was previously presented as a possible option in the RI/RFI Work Plan. Efforts will continue to locate better as-built drawings.

IAG MILESTONES THROUGH FY95 FOR OU 9	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work Plan	08 Jun 90	08 Jun 90
Submit final Phase I RFI/RI Work Plan	26 Nov 91	26 Nov 91
Submit draft Phase I RFI/RI Report	11 Apr 94*	
Submit final Phase I RFI/RI Report	06 Sep 94*	
Submit draft Phase II RFI/RI Work Plan	10 Mar 95*	
Submit draft Phase I proposed IM/IRA Decision Document (DD)	01 May 95*	
Submit final Phase II RFI/RI Work Plan	07 Aug 95*	
Submit final Phase I proposed IM/IRA Decision Document (DD)	27 Sept 95*	

*Extension required.

OU 10 - OTHER OUTSIDE CLOSURES

OU Description

OU 10 is made up of 15 IHSSs scattered throughout the plant, which consist of various hazardous waste units. Six of the IHSSs are located in the PA, two are located in the buffer zone near the present landfill, and the remaining IHSSs are located near various buildings throughout the plant. The types of wastes identified at these sites range from pondcrete/saltcrete storage and drum storage to a utilization yard with waste spills. A final Phase I RFI/RI Work Plan is currently in preparation. The primary components of the RFI/RI Work Plan for OU 10 will be an FSP, Baseline Risk Assessment Plan (BRAP), and an EE Work Plan.

Second Quarter FY94 Activity

All HPGe detector Gamma survey data has been collected. Additional radiation survey data was collected to characterize background gamma radiation near the windsite, along Indiana Street, and in the southern portion of the buffer zone. Initial background data indicated the presence of extremely small levels of americium in the extreme southern portion of the buffer zone. Additional data points were collected to confirm the presence of americium but failed to show any activity above expected background levels. The Gamma survey group used the associated Global Positioning System (GPS) equipment of the Gamma system to survey the surficial soil sampling locations. One detector for the HPGe Gamma survey system failed and curtailed the collection of gamma data until a new detector was assembled and characterized.

Industrial Area (IA) Individual Hazardous Substance Sites (IHSS) Material Removal - No decision was made regarding FY94 responsibility for materials removal in the IA IHSSs. DOE does not want ER to fund RFP Plant Services activities. If material movement can begin soon, additional recovery can be realized by accelerating the outstanding radiation survey and surficial soil sampling activities. The Phase I RFI/RI assessment on active units has been delayed. Work continued in areas where material storage did not adversely affect data collection activities.

DOE requested that EG&G not initiate RFI/RI assessment activities on IHSSs 213 (904 pad) and 214 (750 pad) for OU 10, as these are currently active RCRA

units that will be used to store wastes generated from the OU 4 (Solar Ponds) IM/IRA.

IAG MILESTONES THROUGH FY95 FOR OU 10	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work Plan	27 Nov 91	27 Nov 91
Submit final Phase I RFI/RI Work Plan	01 May 92	01 May 92
Submit draft Phase I RFI/RI Report	25 Aug 94*	
Submit final Phase I RFI/RI Report	30 Jan 95*	
Submit draft Phase I proposed IM/IRA Decision Document (DD)	26 May 95*	
Submit draft Phase II RFI/RI Work Plan	27 Jun 95*	
Submit final Phase I proposed IM/IRA Decision Document (DD)	24 Oct 95*	
Submit final Phase II RFI/RI Work Plan	21 Nov 95*	

* Extension required. Currently being rescoped. OU 7 is currently under stop work order.

OU 11 - WEST SPRAY FIELD

OU Description

The West Spray Field is located within the Rocky Flats Site buffer zone immediately west of the plant security area. The West Spray Field was in operation from April 1982 to October 1985. During operation, excess liquids from solar evaporation Ponds 207-B North and Center (contaminated ground water in the vicinity of the ponds and treated sanitary sewage effluent) were pumped periodically to the West Spray Field for spray application. The spray field boundary covers an area of approximately 105.1 acres; 38.3 acres received direct application of hazardous waste. The RFI/RI process will entail field studies to investigate the presence or absence of hazardous constituents in soil and ground water.

Second Quarter FY94 Activity

Responses to DOE/HQ comments on the Revised Field Sampling Plan and Data Quality Objectives TM received by DOE/HQ on January 14, 1994. The format for the DQOs for documents was revised to reflect new regulatory guidance. The Revised FSP and DQOs TM to combine the two phases of the RFI/RI activities is undergoing major revisions in accordance with preliminary regulatory agency guidance.

In preliminary long-range plans, the assumption was made that OU 11 will go into No Further Action Justification (NFAJ) after the RFI/RI Report is prepared. This option is being investigated to determine if a CMS/FS is needed. Subcontractors were procured to do field work.

IAG MILESTONES THROUGH FY95 FOR OU 11	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work plan	08 Jun 90	08 Jun 90
Submit final Phase I RFI/RI Work plan	02 Jan 92	02 Jan 92
Submit draft Phase I RFI/RI Report	20 Sep 94*	
Submit final Phase I RFI/RI Report	22 Feb 95*	
Submit draft Phase II RFI/RI Work Plan	21 Aug 95*	
Submit draft Phase I proposed IM/IRA Decision Document (DD)	10 Oct 95*	

*Extension required.

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OU 12 - 400/800 AREA

OU Description

The 400/800 Area involves assessment and remediation of the 10 IHSSs at the 400/800 Area: Multiple Solvent Spills at the West and South Loading Dock Areas (IHSSs 116.1 and 116.2); Fiberglassing Areas North and West of Building 664 (IHSSs 120.1 and 120.2); Cooling Tower Ponds - north, east , south, and west of Building 460 (IHSSs 136.1, and 136.2); Building 881 - Conversion Site(147.2); Radioactive Site - South Area (IHSS 157.2); Acid Leaks (2) (IHSS 187); and Multiple Acid Spills (IHSS 189).

Assessment will consist of preparing a Phase I RFI/RI Work Plan, which will include both an EE and a HHRA. After implementation of this Work Plan, field work and sample analysis will be conducted, data will be analyzed, and the Phase I RI Report will be prepared. A Phase II Investigation may be performed as necessary. An FS to determine the best methods to remediate the area will be conducted as part of the assessment.

Remediation will consist of development and execution of a Remedial Action Plan based on results obtained during the assessment phase of the project. This process includes review and approval by the regulatory agencies, followed by a Record of Decision (ROD), release to the public, and implementation of the plan.

Second Quarter FY94 Activity

Approval to proceed with field work was received from the Operational Readiness Review (ORR) Team on February 25, 1994. The only outstanding issues are post closure activities. These include document controlled copies of the complete Work Plan (in order to expedite field activities only, the Field Sampling Section was controlled), a final list of subcontractor required reading lists, and one or two minor clarifications. The pre-evolution meeting for staking activities inside the 400 Area was held on February 23, 1994. Staking locations were verified. Locations in IHSS 116.1 were not in the correct locations and are being restaked. The pre-evolution meeting for surficial soil samples was held on February 28, 1994. Surficial soil sampling began on March 1, 1994.

DOE received final comment responses to the draft IA EE on February 1, 1994. While many of the technical

issues regarding the EE were resolved, it is still unclear whether or not the EE field work will have to be repeated.

Some concerns regarding the surficial soil sampling in OU 12 have arisen. In a few areas of OU 12, there may be previous air samples that have shown above background levels of uranium. The existence of these samples is being investigated. If these samples exist, then the results truly are above background level and/or at some action level specified in the Integrated OUs (8, 9, 10, 12, 13, and 14) Health and Safety Plan (HSP). These concerns become an issue during the screening part of surficial soil sampling according to the Rocky Flats method. This method puts the samples through a Number 4 sieve and at that time there is a potential to create airborne dust particles. These issues will be resolved before work in specific IHSSs can begin. Currently, those IHSSs that can be worked without this issue are being sampled first.

IAG MILESTONES FOR FY95 FOR OU 12	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work plan	08 May 92	08 May 92
Submit final Phase I RFI/RI Work plan	05 Oct 92	05 Oct 92
Submit draft Phase I RFI/RI Report	20 Apr 94*	
Submit final Phase I RFI/RI Report	15 Sep 94*	

* Extension required.

041

OU 13 - 100 AREA

OU Description

Cleanup of the 100 Area involves the assessment and remediation of 14 IHSSs: Chemical Storage - North, Middle, and South Sites (IHSSs 117.1, 117.2 and 117.3); Oil Burn Pit #1 (IHSS 128); Lithium Metal Destruction Site (IHSS 134); Waste Spills (IHSS 148); Fuel Oil Tank (IHSS 152); Radioactive Site - North Area (IHSS 157.1); Radioactive Site - Building 551 (IHSS 158); Waste Peroxide Drum Burial (IHSS 169); Solvent Burning Ground (IHSS 171); Valve Vault 12 (IHSS 186); Caustic Leak (IHSS 190); and the Hydrogen Peroxide Spill (IHSS 191), and the Scrap Metal Site (IHSS 197).

Assessment will consist of preparing a Phase I RFI/RI Work plan, which will include both an EE and an HHRA. After implementation of this Work Plan, field work and sample analysis will be conducted, data will be analyzed, and the Phase I RI Report will be prepared. An FS to determine the best methods to remediate the area will be conducted as part of the assessment.

Remediation will consist of development and execution of a Remedial Action Plan based on results obtained during the assessment phase of the project. This process includes review and approval by the regulatory agencies, followed by a ROD, release to the public, and implementation of the plan.

Second Quarter FY94 Activity

Modification of the OU 13 sampling plan to take advantage of the construction activities planned for Tent #1 was approved by the regulatory agencies and DOE. Sampling was completed.

TM #1, *Addendum to the Field Sampling Plan*, is being revised for CDH and EPA approval. This document makes slight changes to the FSP. There is no milestone associated with its delivery; however, surficial soil sampling cannot begin until the regulatory agencies concur with the proposed sample locations. Surficial soil sampling in OU 13 began in late March 1994. Revision of a draft letter report/sampling plan for CDH and EPA approval was completed. The letter report will be called OU 13 TM #1, *Addendum to the Field Sampling Plan.* It makes slight changes to the FSP and needs to be a controlled document. There is no milestone associated with its delivery; however, surficial soil sampling cannot

begin until agency concurrence with the proposed sample locations has been received. Significant alteration of the Computer Aided Design/Geographical Information System (CAD/GIS) figures are required to meet DOE's expectations. Additional NaI Field Instrument for Detection of Low-Energy Radiation (FIDLER) surveys of the portion of IHSSs 117.1 and 197 between the PA fences are being added based on HPGe survey results.

DOE requested a further modification of the procedure FO.28 Tank and Pipeline Investigation. A revision reflecting DOE's concerns is being prepared.

IAG MILESTONES THROUGH FY95 FOR OU 13	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work plan	15 May 92	15 May 92
Submit final Phase I RFI/ RI Work plan	12 Oct 92	12 Oct 92
Submit draft Phase I RFI/RI Report	08 Aug 94*	
Submit final Phase I RFI/RI Report	11 Jan 95*	

* Extension required.

OU 14 - RADIOACTIVE SITES

OU Description

Work at the "Radioactive Sites" involves the assessment and remediation of eight IHSSs: Radioactive Site - 700 Area Site #1 and Site #2 (IHSS 131); Radioactive Soil Burial - Building 334 Parking Lot and Soil Dump Area (IHSSs 156.1); Building 444 Parking Lot (IHSS 160) and Building 664 (IHSS 161); and Radioactive Site - 700 Area Site #2 (IHSS 162); and Radioactive Sites - 800 Area which includes the Concrete Slab, Building 886 Spills, and the Building 889 Storage Pad (IHSSs 164.1, 164.2, and 164.3). In 1991, one of two Soil Dump Area IHSSs (156.2) was deleted from OU 14 and added to OU 6.

Assessment will consist of preparing a Phase I RFI/RI Work Plan, which will include both an EE and an HHRA. After implementation of this Work Plan, field work and sample analysis will be conducted, data will be analyzed, and the Phase I RI Report will be prepared. An FS to determine the best methods to remediate the area will be conducted as a subsequent phase to the assessment phase.

Remediation will consist of development and execution of a Remedial Action Plan based on results obtained during the assessment phase and feasibility study of the project. This process includes review and approval by EPA and CDH, followed by a ROD, release to the public, and implementation of the plan.

Second Quarter FY94 Activity

Revision of the OU 14 schedule is 90 percent complete. This effort will include the substitution of geostatistical data analysis of all existing data for the entire IA instead of preparation of the first two TMs present in the OU 13 and 14 Work Plans. Some of the limited (nonintrusive) studies for this OU were pushed into FY95. In addition, new equipment may allow the soil gas collection and analysis to proceed much faster than originally planned.

Work began on the tasks necessary for the OU 14 ORR. Building 885-6 indoctrination will be scheduled concurrent with the beginning of field investigations.

IAG MILESTONES THROUGH FY95 FOR OU 14	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work Plan	26 Jun 92	26 Jun 92
Submit final Phase I RFI/RI Work Plan	19 Oct 92	19 Oct 9
Submit draft Phase I RFI/RI Report	20 Dec 94*	
Submit final Phase I RFI/RI Report	23 May 95*	

* Extension required.

OU 15 - INSIDE BUILDING CLOSURES

OU Description

OU 15 was originally comprised of eight IHSSs:

- IHSS 178, Building 881 - Drum Storage Area
- IHSS 179, Building 865 - Drum Storage Area
- IHSS 180, Building 883 - Drum Storage Area
- IHSS 204, RCRA Unit 45, Building 447 - Original Uranium Chip Roaster
- IHSS 211, RCRA Unit 26, Building 881 - Drum Storage Area
- IHSS 212, RCRA Unit 63, Building 374- Drum Storage Area
- IHSS 215, Unit 55, 12 - Tank T - 40
- IHSS 217, RCRA Unit 32, Building 881 - Cyanide Bench Scale Treatment

During April 1992, IHSS 215, Unit 55.13 - Tank T - 40, was deleted from OU 15 and added to OU 9 as part of a IHSS realignment pursuant to Part 32, Paragraph 191 (Additional Work or Modification to Work) of the IAG. This change was recommended by DOE in the OU 9 Phase I RFI/RI Work Plan approved by CDH and EPA in April 1992. Also, IHSS 212, RCRA Unit 63, Building 374 Drum Storage Area was removed from the OU 15 RFI/RI process since it is currently active as a Drum Storage Area and has been included in the Rocky Flats RCRA Part B TRU Mixed Waste permit application. The remaining six IHSSs currently have interim status under RCRA.

Closure Plans for the IHSSs were submitted to CDH during 1988 and 1989. The IHSSs were also included within the IAG. During scoping meetings for preparation of the Phase I RFI/RI Work Plan for OU 15 conducted between EPA, CDH, and DOE during April 1992, the Closure Plan and RFI/RI presses were combined. In effect, the Clean Closure Performance Standard (5 CCR 1007-3 Part 265.111) will serve as the Applicable or Relevant and Appropriate Requirements (ARARs) for the OU 15 RFI/RI inside buildings and Closure Plans will no longer be prepared. The public comment period required for the Closure Plan process will be fulfilled through the IM/IRA process of the IAG.

Drums containing solids and liquids were stored at the OU 15 IHSSs. Types of waste included oils, coolants, and solvents containing chlorinated hydrocarbons (RCRA F001 and F002 wastes) and waste paints and metals contaminated with solvents. Hazardous

constituents include chlorinated solvents, beryllium, and uranium. No known spills or releases occurred. The current focus is characterization of contamination associated with the OU 15 IHSSs inside buildings, evaluation of the likelihood of contaminant exterior outside the buildings, and, if applicable, decontamination of the concrete floors and other facilities at the indoor RCRA units and remediation of contamination outside the buildings, if found.

Second Quarter FY94 Activity

A walk through of OU 15, Building 881 IHSSs, with EPA and CDH was conducted on February 10, 1994. IHSS 211, Room 266B, (RCRA Unit 26), within Building 881, was visited specifically to discuss the need for further work outside Building 881. As a result of the OU 15 walk through, it was decided that additional historical data regarding IHSS 211, OU 1 RFI/RI data, and Building 881 footing drain outfall sampling provide sufficient information to conclude that no contaminants have been released outside the building.

TM #1, *Draft Field Sampling Plan*, was delivered to EPA and CDH for review and comment. The first two TMs required by the IAG for the OU 15 HHRA were incorporated into TM #1. However, CDH and EPA indicated within unofficial comments on TM #1 that a HHRA may not be necessary for OU 15 and the HHRA TM information and references should be removed from TM #1 for OU 15. COCs and PRGs are the topics included. CDH suggested that verification sampling of the Phase I RFI/RI Work Plan for OU 15 may be necessary to demonstrate achievement of the ARARs (Clean Closure Performance Standard). Review and discussion of the TM #1 results are continuing.

IAG MILESTONES THROUGH FY95 FOR OU 15	SCHEDULE	ACTUAL
Submit draft Phase I RFI/RI Work Plan	01 Jun 92	01 Jun 92
Submit final Phase I RFI/RI Work Plan	26 Oct 92	26 Oct 92
Submit draft Phase I RFI/RI Report	01 Aug 94*	
Submit final Phase I RFI/RI Report	04 Jan 95*	

*Extension required.

OU 16 - LOW PRIORITY SITES

OU Description

This assessment activity consists of preparing a draft and final "No Further Action Justification Document" for seven IHSSs: Solvent Spill, Antifreeze Discharge, Steam Condensate Leaks (400 and 700 Areas), Nickel Carbonyl Disposal, Water Treatment Plant Backwash Pond, and Scrap Metal Sites. In addition, the draft document must be reviewed, comments resolved, and the draft finalized.

Second Quarter FY94 Activity

The Public Comment Period for the "Proposed Plan and draft Modification (PP/DM) of Colorado Hazardous Waste Permit for RFP OU 16: Low Priority Sites" scheduled for November 8, 1993, through January 7, 1994, was extended until February 7, 1994. Public notification of the OU 16 Public Comment Period was provided within two local newspapers by January 7, 1994. A responsiveness summary for public comments on the PP and DM and a ROD to close OU 16 as an OU at Rocky Flats is being prepared.

The preliminary Responsiveness Summary (RS) to Public Comments was completed on February 18, 1994. The objective of a preliminary RS to Public Comments on the OU 16 Proposed PP/DM is to facilitate agreement among EPA, CDH, DOE, EG&G as to what are the actual Public Comments.

A meeting was held on March 3, 1994, with EPA, CDH, DOE, and EG&G to discuss the Public Comments on the OU 16 PP and also the preliminary RS to Public Comments. The objective is to obtain agreement as to what the public comments actually entail and to expedite the response process. The preparation of the ROD began in March 1994. This action will close OU 16 at Rocky Flats.

IAG MILESTONES THOUGH FY95 FOR OU 16	SCHEDULED	ACTUAL
Submit draft No Further Action Justification Document	04 Mar 92	04 Mar 92
Submit final No Further Action Justification Document	30 July 92	30 July 92

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SITEWIDE ACTIVITIES

OU Description

Sitewide activities include several tasks that encompass a wide variety of plans, procedures, reports, studies, and other activities required by the IAG and that apply to RFP environmental restoration activities in general. The activities include, but are not limited to, the HSP, a Sampling and Analysis Plan, a Plan for Prevention of Contaminant Dispersion, the Community Relations Plan, the Discharge Limits for Radionuclides Work Plan, Treatability Study deliverables, the Background Study Plan, Administrative Record, State Response (support for CDH oversight), Historical Release Report, Operations Management, Decontamination Facilities, Contractor yard support, ER Waste handling facilities, geologic characterization, hydrogeologic characterization, and ground water monitoring.

Second Quarter FY94 Activity

Sitewide Treatability Studies

Bioremediation - Issues in the Quality Assurance Project Plan (QAPjP) and the EPA guidance documents for the treatability study Work Plan have been incorporated. DOE received the document for review. DOE received a completed Bioremediation Technical Task Plan for FY95 from the contractor.

Annual Report - Comments on the final draft of the FY93 Annual Report were incorporated. The final Annual Report was issued in March 1994.

Magnetic Separation - DOE Granted a National Environmental Policy Act (NEPA) categorical exclusion (CX) for the magnetic treatability test. This issue had delayed the initiation of the test program. The first series of tests on RFP soil started on February 17, 1994.

Other Sitewide Activities

Administrative Record (AR) - An AR Routine Document Type List was developed using the IAG, OSWER Directive, Code of Federal Regulation, and Hanford AR, as a guidance. This list will reduce delays in placing certain documents in the AR. The list was reviewed by DOE and is in the process of being approved. On February 22, 1994, DOE sent agreement to EG&G on the letter of understanding regarding the AR's process for confidential/privileged documents and the use of a routine AR's document list.

Community Relations - Community Relations developed public involvement plans for OU 4, Accelerated Clean up, and IAG Renegotiation, which includes public meetings, public involvement, and comment periods. Community Relations met with Jessie Roberson, Acting Assistant Manager for ER, DOE, to discuss the relationship between ER and Community Relations.

Industrial Area Interim Measure/Interim Remedial Action Plan (IA IM/IRAP) - A preliminary draft IA IM/IRAP document presentation meeting was held on February 23, 1994. DOE completed and provided comments to EG&G on February 25, 1994. The document was delivered to the agencies in March 1994.

Industrial Area Integrated OUs 8, 9, 10, 12, 13, and 14 Environmental Evaluation (EE) - DOE received responses to their comments from EG&G on February 1, 1994, regarding the IA EE documents. When DOE has completed its review of the responses, a meeting will be held between the regulatory agencies, DOE, and EG&G to establish criteria for review of the current format of the IA EE Reports. The IA EE corrective action plan was completed and received DOE on February 15, 1994.

Decontamination and Decommissioning (D&D) - The draft Radiological Sampling Plan for Building 788 was received by DOE for review and comment on February 2, 1994. At a meeting with EG&G, the language of the plan was revised to clarify the objectives of the sampling and the number of points that must be surveyed were reduced.

DOE received the RCRA Closure Plan to Units 21 and 48 for Building 788 on February 4, 1994, for review and comment. DOE requested that the plan be more specific to the RCRA Units and contain more discussion on the preferred disposition of each component of the RCRA units. On March 11, 1994, the second revision was received by DOE; it incorporated DOE's requests.

A meeting was held to discuss ideas for FY94 and FY95 D&D projects. DOE requested EG&G to put together a schedule and preliminary cost estimate that were presented to DOE on February 14, 1994. The proposal was for one project in a plutonium production facility, one to two projects in a non-plutonium facility, and approximately one-half dozen projects of a smaller nature, such as a small support facilities or tanks. Additional D&D projects are in the process of being

identified that could be completed over the next 3 years. Two plutonium pilot projects were selected as well as a complete facility D&D. In addition, several small projects that could be completed during FY94 were identified.

Other Activities

Baseline Risk Assessment Stop Work Order - Informal agreement was reached between EPA, CDH, and RFO on data aggregation for baseline risk assessment exposure calculations, the final unresolved issue from the August 12, 1993, stop work order. The data aggregation methodology was formally transmitted to EPA and CDH on March 28, 1994, along with a letter requesting written approval of the methodology. In a separate letter to EPA and CDH, RFO will request that 6-weeks be allowed to assess the OU schedule and cost impacts of the increased scope resulting from the revised risk assessment methodology. EG&G will be directed to review the revised methodology and provide RFO with schedule and cost impacts on the OUs.

IAG MILESTONES FOR SITEWIDE ACTIVITIES	SCHEDULE	ACTUAL
Submit draft Background Study Report (Water)	15 Dec 89	15 Dec 89
Submit draft Background Study Report (Soils)	15 Dec 89	15 Dec 89
Submit draft Community Survey Plan	23 Jan 90	23 Jan 90
Submit final Community Survey Plan	22 Mar 90	22 Mar 90
Submit draft Health and Safety Plan	15 Aug 90	15 Aug 90
Submit draft Quality Assurance Project Plan	29 Aug 90	29 Aug 90
Submit draft Standard Operating Procedures	29 Aug 90	29 Aug 90
Submit draft Plan for Prevention of Contaminant Dispersion	19 Sep 90	19 Sep 90
Submit draft Treatability Study Plan	21 Sep 90	21 Sep 90
Submit draft Community Relations Plan	01 Nov 90	01 Nov 90
Submit final Health and Safety Plan	12 Nov 90	12 Nov 90
Submit revised Background Study Report	21 Dec 90	21 Dec 90
Submit final Community Relations Plan	22 Jan 91	22 Jan 91
Submit final Quality Assurance Project Plan	01 Mar 91	01 Mar 91
Submit final Standard Operating Procedures	01 Mar 91	01 Mar 91
Submit draft Radionuclides Discharge Limits Plan	05 Apr 91	05 Apr 91
Submit Community Relations Plan Responsiveness Summary	21 Jun 91	21 Jun 91
Submit final Treatability Study Plan	03 Jun 91	03 Jun 91
Submit final Plan for Prevention of Contaminant Dispersion	22 Jul 91	22 Jul 91
Submit final Plan Discharge Limits Radionuclides	16 Sep 91	16 Sep 91

IAG MILESTONES FOR SITEWIDE ACTIVITIES	SCHEDULE	ACTUAL
Submit final PPCD and Responsiveness Summary	25 Nov 91	25 Nov 91
Submit draft Historical Release Report	08 Jan 92	08 Jan 92
Submit Responsiveness Summary for DLRP	31 Jan 92	31 Jan 92
Submit final Historical Release Report	03 Jun 92	03 Jun 92
Submit Annual Treatability Study Report	08 Mar 93	08 Mar 93

APPENDIX A: ISSUE PAPERS

INTERAGENCY AGREEMENT RENEGOTIATION 94-ER-01

Issue

Develop a strategy to renegotiate the Interagency Agreement. The primary objective of the strategy is to obtain a flexible IAG.

Background

In order to establish a common basis of understanding and to integrate the requirements of federal regulators with those of the CDH, an IAG was negotiated between DOE, EPA, and CDH and signed on January 22, 1991. The IAG established the legally enforceable framework at RF to facilitate coordination of environmental cleanup and oversight efforts and to standardize requirements. The IAG establishes specific milestones and time frames for remedial actions as well as penalties for noncompliance with the agreement. Because the negotiated IAG schedules for the original 268 enforceable milestones were based on limited DOE ER experience and ideal conditions, several assumptions regarding work activity scope, durations, and costs have proven to be incorrect. This has resulted in increasing difficulty to comply with the IAG. In essence, the IAG establishes fixed schedules covering a period of 12 years for a work scope that was ill defined and still evolving.

The existing IAG has enforceable milestones commitments through FY 2001. The mechanisms available to change schedules in the current IAG is through Part 42, "Extensions", Parts 12 and 16, "Dispute Resolution", and Part 32, "Additional Work or Modification of Work." As currently written, Part 42 of the IAG, Extensions does not specifically provide for modification of the agreement to acknowledge program issues such as funding, reviews, procurement, or other changes that impact the original technical, cost, and schedule baselines of the program.

Corrective Actions

To accomplish our goal of obtaining a flexible agreement, a mechanism or process must be developed that allows formal and controlled inclusion of impacts resulting from the disposition of all current and future issues. The key to the success of this strategy is going to be the ability to obtain concurrence on the process from the regulators. Five

	primary issues facing the renegotiation efforts today are major components of the process. The primary issues are as follows: Program Assumptions, Adequacy of Funding Request, Work Scope Prioritization, Dispute Resolution Process, Emerging Work Scope, and Change Control.
Scheduled Completion Dates	N/A
Actual Completion Date s	N/A
Current Status	N/A
Funding Status	Adequacy of Funding Request is one of the primary issues facing the renegotiation efforts. The regulators have never accepted the fact that full-funding requirements could not be obtained and continue to doubt DOE's commitment to request full funding. An understanding and compromise between parameters of full-funding requirements is needed. A determination of what is reasonable based on resource availability and process constraints (people, equipment, etc.) and what is realistic as far as funding availability must also be made. DOE should involve EPA and CDH in the prioritization of the work activities to be accomplished with available funds. This would be done in conjunction with the proposed flexible milestone concept. This process should be an annual event in order to adapt priorities to funding availability. This issue needs to be addressed at the executive level of all involved agencies in order to reach concurrence on what constitutes full funding.

HUMAN HEALTH RISK ASSESSMENT 94-ER-02

Issue

On August 18, 1993, the DOE issued a "Stop Work" letter to EG&G on the Human Health Risk Assessment (HHRA) activities at Operable Units (OU) 1, 2, 3, 4, 5, 6, and 7.

Background

The HHRA portion of the IAG is based on the implementation of both CERCLA requirement and RCRA requirements. EPA has responsibility for the implementation of CERCLA requirements and CDH has the responsibility for the implementation of RCRA requirements. OUs 1 and 2 are joint EPA and CDH lead sites, so a compromise between CERCLA HHRA requirements and RCRA HHRA requirements was needed. Since the CERCLA and RCRA HHRA requirements are vastly different, much time was spent by DOE and EG&G trying to negotiate a compromise HHRA. Even though other OUs are either EPA or CDH lead sites, EPA, CDH, and DOE felt that the compromise HHRA approach should be used at all OUs for consistency.

Since a compromise could not be reached between CERCLA and RCRA requirements within the HHRA, EPA, and CDH stopped work on HHRAs on August 18, 1993. There were four areas specifically cited within the stop work letter. These were:

1) Aggregation of OU data for the purpose of comparing to background concentrations.

2) Selection of COCs for both ecological and human health baseline risk assessments.

3) Aggregation of data for the purpose of conducting an exposure assessment.

4) Statistical comparisons of OU data to background data.

Corrective Actions

On December 22, 1993, DOE instructed EG&G to resume work on all background comparison issues and COC issues. This meant that stop work issues number 1, 2, and 4 above were started on this date.

	DOE, EPA, and CDH are still not in agreement on how to aggregate data for the purpose of conducting an exposure assessment. This issue has been raised in the management chain and is currently going through formal dispute resolution.
Scheduled Completion Dates	Dependent on final resolution of the dispute resolution process.
Actual Completion Dates	Unknown
Current Status	The background comparison is currently being performed at OUs 3, 6, and 7. Background comparisons at OU 5 will begin when the OU database is adequate. Background comparisons at OUs 1, 2, and 4 have been completed. The selection of COCs will begin at OUs 3, 5, 6, and 7 after the background comparison has been completed. COCs have been evaluated at OUs 1, 2, and 4. Informal agreement was reached between EPA, CDH, and RFO on data aggregation for baseline risk assessment exposure calculations, the final unresolved issue from the August 12, 1993, stop work order. The data aggregation methodology was formally transmitted to EPA and CDH on March 28, 1994, along with a letter requesting written approval of the methodology. In a separate letter to EPA and CDH, RFO will request that 6-weeks be allowed to assess the OU schedule and cost impacts of the increased scope resulting from the revised risk assessment methodology.
Funding Status	All HHRA work is being funded through the individual OU work packages.

ONSITE SURFACE WATER MANAGEMENT 94-ER-03

Issue

Surface Water Management (Option J) at RFP includes management of the STP effluent and all surface runoff tributary to the eastern plant boundaries. The STP effluent is a significant percentage of total runoff.

Background

For some time Surface water quality at RF has been a concern to local cities, DOE, EG&G, federal and state agencies, and the public because of the location of two drinking water reservoirs immediately downstream of the plant. Great Western Reservoir and Standley Lake provide drinking water to communities in the vicinity of the plant. Concerns were intensified by relatively minor but highly visible incidents including the chromic acid incident and the atrazine observation in the terminal ponds. The FBI and EPA investigation of alleged violations caused severe concern by nearby residents. Current plans evolved from technical requirements identified by plant personnel, DOE Orders, changing regulations, and various agreements with cities and regulatory agencies. These plans are consistent with the Option J Selected Onsite Improvements developed by a working group formed in the summer of 1989 at the request of Congressman David Skaggs (2nd U. S. Congressional District) to address water management options at RFP.

Corrective Actions

Onsite Water Management projects (Option J) are aimed at improving pond dam safety and water control operations, upgrading effluent treatment capabilities, improving site drainages and flood control, and minimizing downstream discharges of plantsite waters.

The improvement of dam safety is a critical component of RFP surface water management. The terminal dams were originally designed for short-term stormwater retention. Current efforts to satisfy the Agreement in Principal (AIP) make short-term retention difficult and often impossible. Long-term retention has created several dam safety concerns that are being investigated in order to determine what measures are necessary to allow pond operations to continue in a safe manner and to avoid uncontrolled discharges. The improvement of water control operations currently includes the installation of environmental monitoring stations to

characterize RFP surface waters within major drainages.

All surface water discharges customarily meet local water quality standards. Treatment upgrades are required to improve preparedness for unforeseen conditions and are in anticipation of future, more restrictive, standards. Removal of radionuclides at extremely low levels is a major focus of these upgrades.

Improving site drainages and flood control is for the purpose of protecting plant facilities and property, maintaining or improving emergency response capabilities during large storm events, reducing contaminant transport potential during large store events, and providing runoff and spill controls consistent with Clean Water Act Pollution Prevention Best Management Practices. Over the years, plant development has increased the percentage of impervious surfaces and thus created significant increases in storm runoff from a given storm event size. Downstream drainage systems originally designed with sufficient capacity to satisfy DOE Orders are no longer adequate. In addition, many of the drainage structures are clogged with debris and sediment, further compounding runoff control problems. Reconstruction of the South Interceptor Ditch (SID), Building 991 flood protection, Central Avenue drainage repairs, A-1 and B-1 Ponds Bypass enhancements, and developing routine maintenance capabilities are key projects under improving site drainages and flood control.

Minimizing downstream discharges may help reduce operating costs and the potential for regulatory violations associated with pond discharges, helps satisfy AIP Zero Discharge goals, and improves dam safety by decreasing water volume retention requirements. Projects include the recycling of Pond C-2 water into the raw water system for cooling town usage, and enhancing spray evaporation capabilities.

Scheduled Completion Dates

IAG MILESTONE	DUE DATE
Environmental Monitoring Stations	Sept 1994
Drainage Repairs and Improvements Plan	Sept 1994
Terminal Dams Geotechnical Evaluation	Nov 1994
Pond C-2 Discharge Minimization	June 1995
South Interceptor Ditch Reconstruction	June 1996

Actual Completion Date s	N/A
Current Status	In Progress
Funding Status	Funding responsibility was transferred to EM-40 in FY93. Funding is expected to continue for ongoing projects. Funding for other projects is unknown for FY95 at this time. Funding cuts for FY97-99 have resulted in some out-year schedule delays.

POND WATER MANAGEMENT IM/IRA 94-ER-04

Issue

Surface Water Management (Option J) at Rocky Flats includes management of the Waste Water Treatment Plant effluent and all surface runoff tributary to the eastern plant boundaries. The STP effluent is only a small percentage of total runoff.

Background

For some time surface water quality at RFP has been a concern to local cities, DOE, EG&G, federal and state agencies, and the public because of the location of two drinking water reservoirs immediately downstream of the plant. Great Western Reservoir and Standley Lake provide drinking water to communities in the vicinity of the plant. Concerns were intensified by relatively minor but highly visible incidents including the chromic acid incident and the atrazine observation in the terminal ponds. The FBI and EPA investigation of alleged violations caused severe concern by nearby residents. Current plans evolved from technical requirements identified by plant personnel, DOE Orders, changing regulations, and various agreements with cities and regulatory agencies.

Corrective Actions

All surface discharges customarily meet or exceed local water quality standards. Corrective actions are required to improve preparedness for unforeseen conditions and in anticipation of future, more restrictive, standards. Some are required by agreements and others are necessary for effective management of runoff. These corrective actions will be addressed by a Pond Water Management IM/IRA Decision Document (DD), as detailed below:

Request for IM/IRA. - DOE, DOE, and EG&G were initially notified by EPA in December 1991, June 1992, and October 1992 that the Clean Water Act (CWA) coverage of the Rocky Flats surface water ponds would be removed under the new NPDES permit. EPA and CDH promulgated the use of the CERCLA process to supplant the CWA permit in regulation of the ponds and their discharges. The justification for EPA's position was that "treatment" (apparently even natural settling/clarification processes) was not allowable in "waters of the U. S." This natural settling occurs and is readily acknowledged since the ponds were intentionally designed and constructed as storm water clarifying impoundments and as emergency

spill catchment with exactly that purpose in mind. The regulatory agencies generally acknowledge that the ponds serve a valuable buffering function and provide the option of collecting contaminants in the event of upsets or spills, and thereby reduce the spread and associated risk of health and environmental impacts. DOE decided not to contest the issues of whether the ponds constitute waters of the U. S. and; therefore, the hazardous waste and RCRA issues currently exempted under the CWA would apply. ond management strategy now shifts from water management to control of water, sediments, and associated contaminants in accordance with hazardous waste and other applicable regulations. DOE formally initiated dispute resolution in November 1992 under the IAG with the IM/IRA and withdrew same in November 1992. The dispute was reopened in January 1994.

Scheduled Completion Dates

Complete draft IM/IRA Decision Document November 1993

Actual Completion Date

November 22, 1993

Current Status

DOE formally invoked dispute resolution in January 1994. IM/IRA dispute resolution is proceeding according to processes specified in the IAG. All work on the draft IM/IRA Decision Document was stopped pending dispute resolution. However, implementation activities to secure a mobile treatment system and conduct pilot testing continue to progress.

Funding Status

Funding responsibility was transferred to OU 6, Walnut Creek. Funding is expected to continue for ongoing projects. Funding for other projects is unknown for FY95 at this time.

INDUSTRIAL AREA (IA) INTERIM MEASURE (IM)/INTERIM REMEDIAL ACTION PLAN (IRAP) 94-ER-05

Issue

It is generally acknowledged that certain aspects of the Remedial Investigation/Feasibility Study (RI/FS) work scheduled for the Industrial Area (IA) may be difficult to perform under the present conditions that exist in this area, and that some of this work would be more effectively performed as a part of the Plant Transition and Decontamination/Decommissioning program (D&D). One concern is that contaminated areas would be cleaned at significantly higher cost because of the presence of buildings with vital safety systems in place and potentially recontaminated during the D&D process. It was suggested that if this work is to be deferred, it would be prudent to implement a more comprehensive monitoring program to detect releases that may occur during the interim. Furthermore, Transition and D&D could represent non-routine activities that may increase the risk of spills or other unplanned releases. It was requested that the monitoring network be sufficient to provide early detection of these potential releases so that a response may be enacted before an offsite release occurs, as well as provide recommendations for environmental pathway protection and monitoring to be completed during D&D activities.

The project will evaluate the present monitoring network with respect to potential exposures and migration pathways. This evaluation will include the monitoring of building storm and footing drains and will address their influence on contaminant migration pathways. If necessary, a plan would be implemented that would address deficiencies in the current monitoring network. Additionally, the IM/IRA plan for the IA will evaluate the current administrative guidelines that are in place for the disposition of incidental waters that collect in footing drains, sub-basements, sumps, and valve vaults. The IM/IRA plan will provide recommendations for guidelines for the handling of these waters if none currently exist.

Background

The regulatory agencies were receptive to the idea of an IRAP for quite some time. In July 1993, a project scope and schedule was presented to the regulators and a project scope and schedule agreement was reached. The FY94 work package was built around this scope and schedule.

Corrective Actions N/A

Scheduled Completion Dates

IAG MILESTONE	DUE DATE
Submit draft Decision Document	3/23/94
Submit draft Responsiveness Summary	8/2/94
Submit final Responsiveness Summary	8/23/94
Submit final Decision Document	8/23/94
Scheduled Completion Date of Project	9/7/94

Actual Completion Dates March 23, 1994

Current Status The project continues to run ahead of schedule and under budget. The draft Decision Document (DD) was submitted to the regulatory agencies on March 15, 1994.

Funding Status Funding of this project for FY94 is $1.36 M.

STORAGE SPACE FOR ER-GENERATED MATERIALS 94-ER-06

Issue

Handling, transportation, storage, and disposal of ER generated material.

Background

ER-generated solid material and liquids must be handled, characterized, packaged, transported, stored, and disposed of in accordance with regulatory requirements. Material includes solids from drill cuttings, personal protective equipment (PPE), sediments from the decontamination facility settling tanks, and potentially, ER-generated solid and liquid waste from IRAs. Drill cutting handling requirements are currently being addressed with CDH. A draft procedure has been submitted for regulatory review.

Based on CDH guidance, the proposed procedure requires drill cuttings to be managed based on prior process knowledge until analytical characterization can be made. Once that is completed, a RCRA waste determination will be completed. This will be followed by a risk assessment to determine final disposition based on an acceptable/unacceptable risk to human health and/or the environment.

Limited physical and permitted storage space on plantsite constrains Rocky Flats' ability to appropriately store investigative derived materials (IDM). A request for a permit modification has been submitted. Reaching the capacity for storage of IDM from IHSS pending characterization and issuance of the ROD may impact other ER activities. Rocky Flats currently does not have adequate permitted storage space for IDM.

If limited storage capacity for IDM curtails assessment activity and an IAG milestone is missed, DOE may be assessed penalties under the IAG.

Corrective Actions

Standard operating procedures were developed for the management of IDM, FO.23, Management of Soil and Sediments IDM and FO.29. Discussions are still being carried out with CDH concerning the scope and character of the procedures.

Interim status approval was granted to two RCRA storage units, 18.03 and 18.04. Plans for installing a structure at Unit 18.04 are currently being implemented.

Additional space is being pursued to store non-RCRA wastes.

Environmental Restoration (ER) will continue to evaluate its future storage requirements and track the availability of existing buildings on plantsite. If additional storage is needed, utilization of existing structures will be pursued if practical and feasible. If existing structures are not available, then the construction of an additional facility will be necessary.

Scheduled Completion Dates

The IDM structure at Unit 18.04 will be constructed using the following schedule:

Winter 1994: Procurement of design/build subcontractor.

Spring 1994: Initiate design activities including preparation of the Integrated Work Control Program (IWCP) package, Health and Safety Plan (HSP), drawings, and design submittals.

Summer 1994: Complete design activities and initiate construction.

Winter 1995: Complete construction.

These activities are dependent on approval of the environmental assessment in spring or summer of 1994.

Actual Completion Dates

CDH granted interim status under RCRA Subpart A on August 30, 1991.

RFP is currently negotiating with CDH concerning the handling and management of IDM.

Current Status

Rocky Flats is currently waiting for CDH approval of the RCRA permit modification for the interim status units.

A procurement package is being finalized for the design and construction of the IDM storage facility.

Funding Status

Funding estimates are included in the Five-Year Plan (FYP).

FUTURE LAND USE 94-ER-07

Issue

Development of an integrated Land Use Plan for Rocky Flats needs to occur with stakeholder input to establish the degree of cleanup required for individual sites. Stakeholder input will not be available until the last half of 1995.

Background

Due to the change in mission for Rocky Flats, new uses for the land and facilities must be determined and implemented. DOE/HQ has stated that the public will have input into decision making for Rocky Flats. Because of the introduction of a new stakeholder group, the Citizen's Advisory Board (CAB), the convening of a Future Site Use Working Group has been delayed. It is strongly advisable that stakeholder groups and plant personnel utilize similar decision making information for future site use planning.

Corrective Actions

Activities are in progress to develop a Facility Land Use Plan for Rocky Flats. This is being done in an integrated fashion by coordinating and sharing information among DOE/HQ, DOE/RFO, EG&G, and the stakeholders.

Tools to provide informed decision making is a critical component of good future site planning. Major tools are being developed through a Systems Engineering Analysis. This will include primary considerations such as traditional land use factors, special factors due to Rocky Flats programs, and a review of contiguous land uses. A constraint and opportunities analysis will be performed to identify potential land use options. Risk, cost and waste generation will be determined for each option and an informed decision will then be possible.

A phased plan for land use is under consideration. This would allow planning to occur in a timeframe that is within a manageable knowledge horizon. It would also provide a framework for interim actions. The phases being examined are event oriented; Phase I occurs until a determination is made regarding the disposition of waste at Rocky Flats; Phase II occurs until a determination is made regarding the disposition of Special Nuclear Material; Phase II determination occurs when Rocky Flats is entirely ready for transfer to another owners.

Scheduled Completion Dates

IAG MILESTONE	DUE DATE
Initial planning tools availability	October 1994
Stakeholder Future Site Working Group final report with DOE concurrence	December 1995

Actual Completion Dates

Planning methodology	Available

Current Status

Work is continuing on the integration of future planning among all groups. Tools also continue to be developed and tested to assure suitability for the task.

Funding Status

Funding is available for 1994. Funding for Accelerated Cleanup schedules is pending.

RF OFFSITE SURFACE WATER MANAGEMENT 94-ER-08

Issue

Option B - Offsite Water Management. - Option B is a combination project protecting water supplies downstream of Rocky Flats. It consists of a 100-year precipitation retention and diversion facility on Woman Creek to protect Standley Lake (the drinking water supply of the local cities of Westminster, Arvada, Northglenn, Federal Heights, and Thornton), and to eliminate Great Western Reservoir as a water supply for the city of Broomfield, with the procurement of an equivalent replacement water supply.

Background

In June 1989, 75 federal agents from the FBI and EPA entered Rocky Flats to investigate allegations of criminal violations of federal environmental laws. Among the allegations was the discharge of hazardous materials to streams leaving the plant and flowing into nearby municipal water supplies. Although the allegations precipitating the FBI/EPA raid were never substantiated by a federal grand jury, previous plant operations have caused local communities to be concerned.

Various contamination incidents, leading to the FBI/EPA raid, led to public concern and a series of actions to protect municipal water supplies. The city of Broomfield was the first to take immediate steps. During the raid, the city constructed a small canal to divert plant discharge and runoff around Great Western Reservoir. This satisfied the immediate concern of ongoing contamination of their water supply; however, city officials acknowledged that this was only a temporary measure until a permanent fix might be achieved.

Local community leaders believed that nothing short of total separation of the community water supplies from plant effluent and runoff was acceptable. Citing public concern about the safety of their water supplies and the possibility of a future plant spill that might contaminate those supplies, officials from the city of Broomfield approached DOE requesting construction of a new dam on Rocky Flats of sufficient size to contain the probable maximum flood (PMF) from the facility. The plant manager agreed to work with city officials to examine alternatives. Broomfield officials then contacted other municipalities (dependent on Standley Lake) for representatives to form an Option Review Group. Participants included representatives from Arvada,

Broomfield, Federal Heights, Northglenn, Thornton, Westminster, Jefferson County, CDH, EG&G, DOE, EPA, officials from the offices of Governor Romer, U.S. Senator Tim Wirth, U.S. Senator Hank Brown, U.S. Representative David Skaggs, and former U.S. Senator William Armstrong. This group met for several months to evaluate options, and drafted a plan called Option B to divert all waters coming off the plantsite from downstream drinking water supplies.

In the meantime, DOE was developing the Zero Discharge Study and the Surface Water Management Plan to address methods of protecting downstream users and societal concerns such as perception. However, because of constituent pressures and fear of bureaucratic delays, city officials were unwilling to wait for the Rocky Flats planning and budgetary process to implement these management plans. Consequently, the cities worked closely with their congressional representatives to formulate language supporting the project and introduced legislative authorization for DOE to issue a grant to reimburse the cities for Option B project costs. The project received commitment from Admiral Watkins, who was the Secretary of Energy at the time.

Corrective Actions

N/A

Scheduled Completion Dates

The funding grant to the cities fc the $101 million to execute all of the Option B components was approved in the summer of 1992. Funding for the Option B project will be carried through 1996. Proposed completion dates for some of the major elements of the project are:

1) 1993 -Completion of replacement water rights purchase for the City of Broomfield.

2) 1994 - Pipeline from Standley Lake Diversion to Great Western Reservoir in place for future use.

3) 1995 - Offsite Woman Creek Reservoir. Water transmission system for Broomfield replacement water supply.

4) 1996 - New water treatment plant for Broomfield. Transmission lines for Broomfield drinking water supply.

Actual Completion Dates	April 1, 1993, Broomfield water rights purchase complete.
Current Status	Broomfield completed its purchase of water rights from the city of Boulder. Right- of-way acquisition for the raw water pipeline should be complete by the end of 1993, as well as purchase of the property site for the new water treatment plant. The cities involved in the Standley Lake Protection Project (SLPP) decided to remove the diversion canal from the project because of local neighborhood opposition to the proximity of the canal to their houses, and Endangered Species Act (ESA) constraints regarding a bald eagle nesting site next to the proposed alignment of the canal. The cities are working on a biological assessment for the SLPP with DOE as the lead agency for Section 7 consultation under the ESA because of the seasonal presence of the bald eagles in the area.
Funding Status	FY funding will be an ER responsibility. FY94 funding is $10 million, with a carryover of unobligated funds from FY92 and FY93 of $24 million. This agreement is based on a Secretary of Energy commitment to the cities involved.

ENFORCEABLE MILESTONES 94-ER-09

Issue	Enforceable milestones are being missed or are in jeopardy of being missed.
Background	There are several enforceable milestones in the Interagency Agreement (IAG) that will not be met. In addition, extensions have been granted for certain milestones but not extensions for the corresponding outyear milestones. Extensions have been requested for all these outyear milestones. However, the agencies are not willing to provide extensions for outyear milestones as they feel it will discourage attempts to accelerate the work. They also do not want to allow extensions for milestones that are being missed because of funding issues (Industrial Area OUs and OU 2). Milestones are being delayed for OUs 2-7 due to the stop work order for the Human Health Risk Assessment. These are expected to be extended after the stop work order has been lifted.
Corrective Actions	The outyear milestones will be constantly evaluated to determine when and if extensions should be requested. The milestones affected by funding shortfalls cannot be recovered. However, other options are being scoped to accelerate remediation activities where possible. These include acceleration of the remedial investigations for OUs 7 and 11, hot spot removals, and prioritization of Individual Hazardous Substance Site's (IHSSs) to identify no further actions and potential early actions. Redefining the Industrial Area OUs is also being recommended based on the results of IHSS prioritization. This will allow portions of the Industrial Area OUs to be completed even though other portions must wait for D&D.
Scheduled Completion Dates	N/A
Actual Completion Dates	N/A

Current Status

The identification of missed milestones and justification, assumptions, and potential accelerated actions for OUs 1-3, and 5-16 were identified in a memorandum to DOE dated March 25, 1994. Several of these accelerated actions are being implemented in FY94. (OU 4 was not included as its schedule has been accelerated and milestones are on schedule.)

Funding Status

Funding of the accelerated actions in FY94 is approximately $4 million.

APPENDIX B: TIGER TEAM STATUS

ENVIRONMENTAL ASSESSMENT STUDY (EAS) "TIGER TEAM" CORRECTIVE ACTIONS

The following section presents the status of EAS corrective actions as of March 31, 1994. The information is an output of the Commitments Tracking System and represents significantly improved, more timely information on "Tiger Team" actions as compared to previous DOE Quarterly Environmental Restoration Compliance Action reports.

The information presents the ISP number for tracking the completion of each action plan, the manager responsible for the plan, due date and completion dates for each task within the plan, individual task manager and task description, the completion certification date when the plan manager certifies that all plan tasks are completed, the verification date when Performance Assurance verifies that plan activities are complete, and the plan status as of the report date. Plan status may be "open," meaning work continues on one or more tasks; "in verification," meaning the plan manager has certified that plan activities are complete and that this is being verified by Performance Assurance; "reopened," meaning Performance Assurance has determined that not all plan tasks have been completed and independently verified.

The Commitments Tracking System follows procedures defined under RFP Administrative Manual ADM 1-10000, Section 3.02. These procedures require that each task be certified as complete by the individual task managers through an Interim Completion Certificate. Once all tasks within a plan are completed, the plan manager submits a completion certificate. Performance Assurance then performs an audit to verify that all requirements specified in the plan have been met. DOE/RFO is formally notified once verification is complete. Task completion deadlines may be extended by task managers upon completion of a Status Revision form and written concurrence by the plan manager. The Commitments Tracking System is updated daily with new status information.

Plant Action Tracking System
Plan Summary Report

Org Name	Org No.	Plans Open	Re-open	Final Cert Due	Action Plan Due	Plans on Hold	Ref to Oth Plans	Complete	Ver	Closed	Total
Env Restoration Mgt	11000	0	0	0	0	3	0	0	0	12	15
Env Remed Proj Mgt	11100	0	1	0	0	0	1	0	0	0	2
Env & Waste Mgt	20000	0	0	0	0	0	0	0	1	0	1
Analytical Labs	21000	0	0	0	0	0	0	1	1	2	4
Syst Integration & Mod	21010	0	0	0	0	0	0	3	0	0	3
74/910 LWT	22100	1	0	0	0	0	0	0	0	1	2
Waste/Res Asy & Stor	22300	1	0	0	0	1	0	0	1	1	4
Regd & Santry Waste	22400	1	0	0	0	0	0	0	1	3	5
Waste Solidification	22500	0	0	0	0	0	0	0	1	0	1
Bldg 374 LWT	22600	1	0	0	0	0	0	0	0	1	2
Waste Programs	23010	0	0	0	0	0	0	0	1	3	4
Waste Proj Support	23200	0	0	0	0	1	0	0	0	0	1
Waste Reg Programs	23300	0	0	0	0	0	0	1	0	4	5
RCRA Reg Programs	23400	0	0	0	0	0	0	2	0	3	5
Waste Minimization	23500	0	0	0	0	1	0	0	0	2	3
Env Prot Mgt	25000	0	0	0	0	2	0	2	0	0	4
Air Quality	25100	0	0	0	0	1	0	0	0	1	2
Ecology & NEPA	25200	0	0	0	0	0	0	0	1	6	7
Surface Water	25300	1	0	0	0	0	0	0	0	4	5
Chem Track/SARA RP	25500	1	0	0	0	0	0	0	1	0	2
771/774 Area Ops	31400	0	0	0	0	0	0	0	0	1	1
Facility 991	32330	0	0	0	0	0	0	0	0	1	1
FPM Project Serv	44600	0	0	0	0	0	0	0	0	1	1
Emerg Preparedness	64000	0	0	0	0	0	0	0	0	1	1
Stress Mach Engr	82300	0	0	0	0	0	0	0	0	1	1
Mach/Proc Engr	83000	0	0	0	0	0	0	1	0	0	1
Process Tech & Support	86000	0	0	0	0	0	0	0	0	2	2
Area Mtce	91000	0	0	0	0	0	0	0	0	1	1
Central Mtce	92000	0	0	0	0	0	0	0	0	1	1
Logistics	94000	0	0	0	0	0	0	0	0	3	3
Traffic	94700	0	0	0	0	0	0	0	0	1	1
Metrology	95000	0	1	0	0	0	0	0	0	0	1
Plans/Coord	96300	0	0	0	0	0	0	0	0	1	1
Total		**6**	**2**	**0**	**0**	**9**	**1**	**10**	**8**	**57**	**93**

APPENDIX C: ACRONYMS

AOC	Area of Concern
ADS	Activity Data Sheet
AIP	Agreement In Principle
ALARA	As Low As Reasonably Attainable
AOC	Area of Concern
AR	Administrative Record
ARAR	Applicable or Relevant and Appropriate Requirements
ASRP	Accelerated Sludge Removal Project
BAT	Best Available Technology
BCP	Baseline Change Proposal
BOA	Basic Ordering Agreement
BRAP	Baseline Risk Assessment Plan
CAB	Citizens Advisory Board
CAD	Computer Aided Design
CAMU	Corrective Action Management Unit
CDH	Colorado Department of Health
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CHWA	Colorado Hazardous Waste Act
CI	Continuous Improvement
CMS	Corrective Measures Study
COC	Contaminant Of Concern
CPFM	Colloid Polishing Filter Method
CPT	Cone Penetrometer Testing
CRP	Community Relations Plan
CSU	Colorado State University
CWA	Clean Water Act
CWQCC	Colorado Water Quality Control Commission
CX	Categorical Exclusion
DAC	Derived Air Concentration
DD	Decision Document
D&D	Decontamination & Decommissioning
DCN	Document Change Notice
DLRP	Discharge Limits Radionuclides Plan
DM	Draft Modification
DNAPL	Dense Non-aqueous Phase Liquids
DOE	Department of Energy
DQO	Data Quality Objectives
DVP	Data Validation Plan
E&WM	Environmental and Waste Management
EA	Environmental Assessment
EcMP	Ecological Monitoring Program
EE	Environmental Evaluation
EM	Environmental Management
END	Environmental NEPA Division

EPA	Environmental Protection Agency
EQS	Environmental Quality Support
ER	Environmental Restoration
ERA	Ecological Risk Assessment
ERM	Environmental Restoration Management
ESA	Endangered Species Act
ESE	Environmental Science and Engineering
FIDLER	Field Instrument for Detection of Low Energy Radiation
FOM	Facilities Operations Management
FONSI	Finding of No Significant Impact
FS	Feasibility Study
FSP	Field Sampling Plan
FTU	Field Treatability Unit
FYP	Five-Year Plan
GAC	Granular Activated Carbon
GIS	Geographic Information System
GPR	Ground Penetrating Radar
GPS	Global Positioning System
H&S	Health and Safety
HAP	Health Advisory Panel
HGMS	High Gradient Magnetic Separation
HHRA	Human Health Risk Assessment
HPGe	High Purity Germanium
HQ	Headquarters
HRR	Historical Release Report
HSP	Health and Safety Plan
IA	Industrial Area
IAG	Interagency Agreement
ICP-MS	Inductively Coupled Plasma Mass Spectrometer
ID	Integrated Demonstration
IDM	Investigative Derived Material
IHSS	Individual Hazardous Substance Site
IM	Interim Measure
IRA	Interim Remedial Action
IRAP	Interim Remedial Action Plan
ITS	Interceptor Trench System
IWCP	Integrated Work Control Package
IX	Ion Exchange
LANL	Los Alamos National Laboratory
LATO	Los Alamos Technology Office
LL	Low-level
LLMW	Low-level Mixed Waste
MOU	Memorandum of Understanding
MTS	Master Task Subcontract
MSA	Major Systems Acquisition
MSVEU	Mobile Soil Vapor Extraction Unit
NaI	Sodium Iodide

NAPLs	Non-Aqueous Phase Liquids
NEPA	National Environmental Policy Act
NFAJ	No Further Action Justification
NOV	Notice of Violation
NPDES	National Pollution Discharge Elimination System
NRDA	Natural Resource Damage Assessment
NTS	Nevada Test Site
O&M	Operations and Management
OPWL	Original Process Waste Line
ORR	Operational Readiness Review
OTD	Office of Technology Development
OU	Operable Unit
PA	Protected Area
PAC	Potential Area of Concern
PCB	Polychlorinated biphenyl
PCCB	Plant Change Control Board
PCP	Process Control Plan
PIT	Process Improvement Team
PMF	probable maximum flood
PP	Proposed Plan
ppb	Parts per billion
PPCD	Plan for Prevention of Contaminant Dispersion
PPE	Personal Protective Equipment
PRG	Preliminary Remediation Goals
PU&D	Property Utilization and Disposal
QA	Quality Assurance
QAPjP	Quality Assurance Project Plan
QP	Quality Plan
RAGS	Risk Assessment Guidance for Superfund
RCA	Radiological Control Area
RCRA	Resource Conservation and Recovery Act
RFEDS	Rocky Flats Environmental Database System
RFI	RCRA Facilities Investigation
RFP	Rocky Flats Plant
RI	Remedial Investigation
ROD	Record of Decision
RPP	Resource Protection Program
RPT	Radiological Protection Technician
RS	Responsiveness Summary
SA	Special Assessment
SAP	Sample and Analytical Plan
SAR	Safety Analysis Report
SID	South Interceptor Ditch
SITE	Superfund Innovative Technology Evaluation
SLPP	Standley Lake Protection Project
SMO	Sample Management Office
SOP	Standard Operating Procedure

SOW	Statement of Work
SPPO	Solar Ponds Program Office
STP	Sewage Treatment Plant
SVE	Soil Vapor Extraction
SVS	Soil Vapor Survey
SW	Surface Water
TCE	Trichloroethene
TDS	Total Dissolved Solids
TIE	Technology Information in Exchange
TM	Technical Memorandum
TRG	Technical Review Group
TSR	Treatability Study Report
TSS	Total Suspended Solids
UBC	Under Building Contaminations
USFWS	United States Fish and Wildlife Service
UV	Ultraviolet
VOA	Volatile Organic Analyte
VOC	Volatile Organic Compound
WBS	Work Breakdown Structure
WS	Waste Solidification

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